ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF

THE ILLINOIS STATE MEDICAL SOCIETY

VOL. LIX | OAK PARK, ILL., MARCH, 1931 | No. 3

ILLINOIS MEDICAL JOURNAL

Published monthly by the Illinois State Medical Society under the direction of the Publication Committee of the Council.

GENERAL OFFICERS, 1930-1931

PRESIDENT.....WM. D. CHAPMAN, Silvis
PRESIDENT-ELECT.....R. R. FERGUSON, Chicago
FIRST VICE-PRESIDENT.....B. G. WILCOX, Joliet
SECOND VICE-PRESIDENT.....OTTO HUBER, Chicago
TREASURER.....A. J. MARKLEY, Belvidere
SECRETARY.....HAROLD M. CAMP, Monmouth

THE COUNCIL

E. H. Weld,	1st District, Rockford	1932
E. E. Perisho,	2nd District, Streator	1932
F. R. Morton,	3rd District, Chicago	1932
J. S. Nagel,	3rd District, Chicago	1931
Thomas P. Foley,	3rd District, Chicago	1933
E. P. Coleman,	4th District, Canton	1931
S. E. Munson,	5th District, Springfield	1931
Chas. D. Center,	6th District, Quincy	1933
I. H. Neece,	7th District, Decatur	1931
Cleaves Bennett,	8th District, Champaign	1932
J. W. Hamilton,	9th District, Mt. Vernon	1933
J. S. Templeton,	10th District, Pinckneyville	1933

EDITOR
CHARLES J. WHALEN.....25 E. Washington St., Chicago

GENERAL COUNSEL
FRANCIS X. BUSCH.....231 S. La Salle St., Chicago

PERMANENT HISTORIAN
IRVING S. CUTTER.....301 East Chicago Ave., Chicago

MEDICO-LEGAL COMMITTEE
J. R. BALLINGER, *Chairman*.....2724 W. North Ave., Chicago
GEORGE H. WEBER, *Secretary*.....Peoria

EDUCATION COMMITTEE
MISS JEAN MCARTHUR, *Secretary*..185 N. Wabash Ave., Chicago

SCIENTIFIC SERVICE COMMITTEE
JAMES H. HUTTON, *Chairman*..6056 Cottage Grove Ave., Chicago
HAROLD M. CAMP, *Secretary*.....Monmouth

PUBLICATION COMMITTEE
J. W. VAN DERSLICE, *Secretary*.155 N. Ridgeland Ave., Oak Park

Outside of editorial or allied views or statements that are the authoritative actions of the Illinois State Medical Society, the organization denies responsibility for opinions and statements published in the ILLINOIS MEDICAL JOURNAL. Views expressed by the various authors and views set forth in various departments in the JOURNAL represent the views of the writers.

State Society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

Send original articles, advertising copy, cuts and all communications relating to advertising to Dr. Charles J. Whalen, c/o ILLINOIS MEDICAL JOURNAL, 185 N. Wabash Ave., Chicago.

Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 1618 Juneway Terrace, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

Subscription price of this JOURNAL to persons not members of the Illinois State Medical Society is $3.00 per year, in advance, postage prepaid, for the United States, Cuba, Porto Rico, Philippine Islands, Hawaiian Islands and Mexico. $3.50 per year for all foreign countries included in the postal union. Canada, $3.25. Single current copies, 50 cents.

Editorials

THE CREDIT IS DUE THE MEDICAL PROFESSION, NOT LAY ORGANIZATIONS

Statistics revealing the average reduction of the death rate in the U. S. registration area by more than 36 per cent in the last thirty years would seem to convince the most presumptious body of lay investigators that the medical profession really does attend to its business in relation to the moot question of prophylaxis and public education.

Some ailments of the human race have experienced an even higher percentage of reduction than that. While it can be said in all verity that the national death rate has been cut nearly two-thirds there are mortality figures from some causes that show that some scourges have been practically wiped out. This results of course from scientific prophyloxis based upon scientific research and scientifically administered.

In all truth it must be confessed that lay-dictated legislation had nothing to do with it, nor did any so-called relief measures based upon false ideas of the good arising from that socialized menace—state medicine.

To be specific in a few instances it must be stated that the mortality in typhoid fever has had a reduction of ninety-three per cent and the mortality from diphtheria has been reduced over forty per cent.

Antitoxin and toxin-antitoxin, resulting from the sacrificing labors and scientific skill of scientific men did the work for diphtheria. No lay dictated law had any hand.

Filtration and chemical treatment of water, pasteurization of milk, and control of carriers—all systems of prophylaxis, and all the direct outgrowth of scientific medical instruction—knocked the strength out of typhoid and paratyphoid fever.

After the doctors had done the work they received to some extent a legal backing. But it was the law and the laity doing the work that

the doctors had laid out for them, *not doctors doing the work that the law and the laity had laid out* that made for success in this endeavor.

If a more specific instance is needed consider what inoculation does for mass examples. Consider for instance the army's experience with inoculations, or serum vaccinations.

In 1900 the army showed a death rate from enteric diseases of 34 per 100,000. This the medical profession managed to reduce by prophylaxis and by inoculation until in 1928 the figures stood at 4.9 per 100,000.

In military life the reduction offers still better food for thought. During the first two years of the Civil War the death rate from typhoid fever stood 1,961 for every 100,000 soldiers. During the first two years of the World War this was reduced to only *five* among every 100,000 soldiers!

From tuberculosis the death rate has been reduced from 195 per 100,000 in 1900 to only 76 per 100,000 in 1928. Chiefly among girls and young women and at the ages between 15 and 24 the least improvement has been shown.

Infant mortality having been reduced from 160 per 1,000 births in 1900 to 65 now shows nearly a sixty per cut cut. It is noticeable too that in states not having the Sheppard-Towner Act the infant mortality reduction was the greater.

Summed up this means that during the last thirty years the general death rate has been cut from 17.8 per 1,000 population to 11.4. Another way of figuring this is to remark that this means an increase in life expectancy from thirty years in 1880 to fifty years in 1925, but even yet the preventable expense of illness and affliction to tax-payers can be reduced still further if such reduction methods are left to the sane and scientific handling of competent medical men.

Deaths from tuberculosis alone are estimated to cost the taxpayers of the United States more than $1,500,000,000 annually. To care for the three major groups of sickness is another expense each year of $927,000,000 plus; $800,000,000 for tuberculosis care; $90,000,000 for heart disease and $37,000,000 for the physically handicapped. Added to the fact that in the United States it is estimated that there are 700,000 persons so crippled that they cannot earn a living; as well as 300,000 and more mental defectives; 75,000 blind, and 45,000 deaf and dumb, it can be decided that from a financial standpoint alone it behooves the nation's doctors to continue to reduce the number of sick and ailing and to keep down the death rate. In the five years between 1924 and 1929 the monetary value of a new born boy's life was increased, thanks to lowered infant mortality, from $7,523 to $9,333.

UNUSUAL PROGRAM OF THE SECTION ON PUBLIC HEALTH AND HYGIENE AT THE EAST ST. LOUIS MEETING

To the Profession of Illinois:

Those of you who were privileged to hear Dr. Norbury's address on Mental Hygiene at the meeting in Joliet last year were undoubtedly impressed by the magnitude of this problem in our state. In view of that fact the Section on Public Health and Hygiene have arranged for a very comprehensive symposium for the East St. Louis meeting in which by address, clinical demonstration and scientific exhibit, it is hoped to present the subject in so complete a manner that it will amount to a postgraduate education along these lines. The program as arranged is as follows:

Dr. Frank G. Norbury—Mental Hygiene in the Home.

Dr. Groves B. Smith, Director of Beverly Farm—Feeble-minded in Illinois.

Dr. Meyer Solomon, Psychiatrist of Municipal Court—Modern Psychiatry, Criminology and Public Health.

Dr. Chas. F. Read—Facilities for Treatment of Mental Disease and Cost.

Dr. Ralph C. Hamill—Diagnosis-Clinical Demonstration of Classes of Mental Diseases.

Dr. Chas. P. Emerson, Dean and Professor of Medicine, Indiana State University—Mental Hygiene.

Dr. Sidney D. Wilgus, State Alienist—Heat Therapy in Paresis.

Margaret McGreevey, R. N.—Value of Bedside Nursing in a Public Health Program.

Dr. Roswell T. Pettit—Public Health Aspects of the Cancer Program.

Dr. D. D. Monroe, Edwardsville, Ill.—Tuberculosis from the Hygienic and Public Health Standpoint.

Dr. H. J. Shaughnessey—Some Experimental Work in Anterior Polio-myelitis.

Dr. Henry R. Krasnow—Aspects of Medical Quackery.

Dr. A. J. McLaughlin—Trends in Public Health Discussant—Isaac D. Rawlings, M. D.

Dr. J. C. Riggin, Ex. Secretary American Heart Association—Heart Subject.

Dr. H. A. Orvis, American Social Hygiene Association—Congenital Syphilis.

This advanced notice of our program is published with the hope that it will stimulate among the membership an interest in the subject that will be reflected by an unusually free and correspondingly valuable discussion at the meeting.

(Signed) Dr. Chas. H. Miller, Chairman,
826 East 61st Street,
Chicago, Illinois.
Dr. Arlington Ailes, Secretary,
La Salle, Illinois.

SCIENTIFIC EXHIBITS AT THE EAST ST. LOUIS MEETING

The Illinois State Medical Society will have an unusual appeal to all exhibitors this year. More room is available for exhibits than at previous meetings. The Society is planning to have an unusual large number of interesting scientific exhibits at the meeting,—these of course must be free from advertising and must have a scientific interest to all members.

It is requested that members of Society, Hospitals, or Medical Schools desiring to send interesting exhibits get in touch with the Secretary, Dr. Harold M. Camp, Monmouth, Illinois, at the earliest possible moment, giving an outline of materials which they desire to exhibit so that they may be passed on by the censoring committee of the Society, at once.

The American Medical Association will have an unusually fine exhibit at this meeting, and arrangements are being made for a number of other large exhibits which have not previously been shown at the annual meetings of the Illinois State Medical Society.

It is hoped that all interested in scientific exhibits will make immediate arrangements so that they can be shown to the members in attendance at East St. Louis on May 5th, 6th, and 7th, 1931.

ABOUT NINETY PER CENT. OF THE HOSPITALS OF THE UNITED STATES ARE NON-PROFIT INSTITUTIONS

There are seven thousand hospitals in the United States containing 900,000 beds, representing an investment of more than three billion dollars. The hospital is fifth in the list of industries from the standpoint of capital investment. About ninety per cent. of the hospitals are non-profit institutions; they cannot be considered a business but a service institution as important to the community as a school, police, or fire department. They serve a scientifically trained medical profession in the care of all people regardless of their special or financial standing, they are therefore public agencies and come under the head of public improvements.

Most people think of the general hospitals in connection with the care of medical and surgical conditions, but statistics show that more than one-half of our hospital beds are in mental institutions.

Hospitals rank as the fifth industry in the United States from the standpoint of capital investment. The average person is interested in the hospital only when himself or a member of his family is forced to make use of one. One out of ten of our population uses the hospital each year.

A COUNCIL OF MEDICAL ECONOMICS OF THE A. M. A. IS THE NEED OF THE HOUR. THIS COUNCIL WILL BE ONE OF THE MOST IMPORTANT UNITS OF THE A. M. A.

History of therapeutics contains no sadder instances than of the proper drug administered in an improper way or under unindicated conditions. Excellent, yes even essential as is the idea of the creation of an A. M. A. Council on Medical Economics, if this bureau is not installed with the basic inherent idea kept in mind it will be useless, and even dangerous.

This purposed council will be to the medical profession what the various bureans of public relations are to large corporations and industrial organizations. It will act as a clearing house for the educational covenanting of the laity and the profession. To function efficiently it will require at its head a medical economist who will devote the necessary time for a competent

salary to this most drastically requisite work. From personal experience it is only right and just to say that the man for this important position shall be of the profession rather than of the laity. Unfortunately the laity has been tried and found wanting as the medium between the public and the scientific mind. The able layman cannot seem to attain to the scientific point of view or the scientific necessity for that perspective. There are in the profession able men whose practice of medicine or surgery has been supplemented so as to include daily dealings with the public mind in the mass. From this group the director or head of the council should be selected. This is a prime essential if the campaign of lay education is to be carried on with success and with respect to the varieties and dignity of the profession as well as to the highest degree of public welfare.

Installation of a council of Medical Economics will be found to be the most efficacious of methods of disposing of the army of quacks, charlatans and cultists as well as of the lay dictation of the practice of medicine that threatens to engulf both the profession and the public in a whirlpool of communistic, inexpert and retrogressive administration of the sacred science of medicine.

For the benefit of those who have not kept in touch with this purposed council of medical economics for the general public, let it be remarked that at the Detroit meeting of the A. M. A., Dr. J. B. Harris of California submitted a resolution from the California State Medical Society providing that such a council on economics should be established. Reference committee on reports of officers recommended that the "board of trustees put the principle into effect by the creation of a bureau of medical economics."

From the recommendation's functioning will result a forum of investigation and data collection and source of later distribution of these findings to the everlasting power and glory of the science of medicine.

This campaign of enlightenment from the medical profession to the general public has long been needed. Some of the iniquitous and anti-scientific legislation upon the statute books of the country would not now be handicapping the practice and science of medicine were it not that the public has for years been under fire from an educational campaign composed of false hypotheses and broadcast by cultists, fanatics and politicians seeking to use the mother profession as a catspaw to drag their own chestnuts from the fire. There has been too, a large group of sincere and earnest persons whose adherence to false leaders, unwitting though this loyalty is, has caused them to serve false gods.

The Great God Jove of the medical profession has been nodding and that to its own undoing.

False doctrines, false assumptions and rank misrepresentation of the medical profession's achievements; of its attitude to the public and to the public mind as well as of its inherent wisdom and competency in its chosen line, have followed this indolent catnaping.

Month after month the newstands, library tables of homes all over the land and of institutions, are filled with periodicals containing cleverly written articles totally and absolutely at variance with medicine and its works. In some instances this misrepresentation from phrase writers has reached the stage of fiction, bearing poisoned and invidious attack upon this self-sacrificing science in the sugar-coated story that appeals to the imagination and impresses the mind. One such appeared within the year in one of the five cent magazines claiming one of the largest weekly circulations in the world. In "Liberty" was published a story garbling what can, does or might happen in a supposedly well regulated institution. This same magazine has also run repeated criticisms of the faith, works and results of the medical profession that would not stand up before a fair jury of well informed persons.

Nor is this magazine alone in this trespass upon the rights of an ancient, an honored and an humanitarian profession.

Literary Digest, Ladies Home Journal, Good Housekeeping, Harper's Magazine, especially for November, 1930 and February, 1931; Delineator, Woman's Home Companion, the Forum and the Survey-Graphic and many others all have published, especially within the past year, one or several articles that grossly misrepresent or falsely educate the public mind along questions where lay judgment is at once a peril and a menace.

A system of "follow-up" by personal approach supplemented by correspondence and printed publicity is one of the most effective efforts of

the public relations department of one of the most invidious of the pseudo-medico-religious cults. In this respect the medical profession would do well for once to take a leaf out of the cultist's book. Let a single printed word or phrase disparaging to this cult appear and be brought to its attention and immediately the war is on. First come callers in person to demonstrate that the offending editor has sullied "the Truth." Next is a barrage of correspondence, suave but insistent and persuasively suggesting such reparation as apology, retraction and even a right-about face opinion on the grounds that the editor was "misinformed."

Specifically explained the ultimate request is that in the same medium as the offending matter appeared, that this cult shall be allowed as much space for self justification through a statement of what the cult thinks to be the truth.

As a whole the medical profession has let propaganda disparaging to its good name and good work go unchallanged in scores of the leading periodicals of the United States.

Here is where the director of the council of the medical economics finds an urgent task, long awaiting the skill of an understanding hand and gifted mind. Each attack against the aims, ideas, and judgment of ethical medicine heard over radio, from the lecture platform or in the public press demands not only an answer but a direct positive refutation of its unjustified statements that are contrary to facts.

The printed word is but word of mouth made eternal and undeniable. This should be borne in mind both because of its benefits as well as for its malevolence. "What has passed your lips is never your own." It behooves the trustees creating this council to see that it chooses for its representative both a member of the profession who knows medical economics thoroughly, who knows what he must say to conform with the ideals and essentials and ethics of the profession, and how to get his message over to a public. This carrying a message to Garcia will not be any facile task. It has been delayed too long. But the slogan of immediacy must be "Up men and at them," even if the methods of dissemination include a direct adaptation in some instances of the cultist system with which to repel or at least to divert attacks.

This council will be one of the most important units of the great A. M. A. It will act as the envoy plenipotentiary of the medical profession to the general public from private patient to public philanthropist and lawmaker.

THE VERY PROTECTION DR. GLENN FRANK WISHED TO ARRANGE FOR, WAS ARRANGED AND FUNCTIONING LONG AGO. MEDICINE IS THE MOST SELF DESTRUCTIVE OF ALL SCIENCES

State socialism masquerading under the name of state medicine is an unlicensed daughter of joy that fools not at all the ethical medical profession no matter how gracefully she hoodwinks the uninformed or misinformed man in the street.

For some time the profession at large, by organization and by individuals, has become seriously at work considering those economic factors that keep up the high cost of medical education; increase the cost of care of the sick and ailing, and in utter defiance of all the humanities and of all of the inherent rights of personal economics, destroys the very living of those untiring public servants, members of the ethical medical profession and that will in the end make them unfit for service.

Medicine is the most self-destructive of all the sciences by which men hold place in the economic life of civilization. To be a good doctor in every sense of the word a man must teach a citizenry how to keep from falling ill, how to gain health and how to retain it.

In other words a physician worthy of the name is continually undermining the very ground upon which he needs must walk.

Yet in the very face of this knowledge the medical profession continues to do the utmost best for the public health—and the medical profession almost to a man is unanimous in its ideas that the worst malady that can affect a nation is state medicine, or governmental controlled medicine, because this is, in the first, last and even middle analysis nothing less than the advance guard of socialism.

Considering that at great expense, much time, and even greater trouble the medical profession for over twenty years has been devoting itself to a solution of those problems that involve the economics of the profession it is somewhat surprising to have a complete outsider face one of the most learned bodies of professional men in

the country and tell them what they should do.

The socialistic tendency to refer all dilemmas to Washington as if Moses the great lawgiver sat there on the Mount and had divine inspiration, or as if the Delphic oracle functioned once again, would be ridiculous if it did not bear in the train of its absurdities such a load of menace and calamatous evil for an unsuspecting and ignorant people.

It is more than unfortunate that Glenn Frank, president of the University of Wisconsin, should state publicly that there is even a possibility that the solution of national health problems lies in governmental control of the practice of medicine. A year has passed since Mr. Frank informed the American College of Surgeons at its convention that the outstanding need of the profession was the "education of the public to a program of disease prevention" if the profession would not witness the elimination of the private practitioner and the taking over of medical practice by "other agencies"—i. e. the government or lay corporations practicing medicine and the like.

During the twelve month just ended these ideas of Glenn Frank have sprouted in many a community. Flourishing like the proverbial bay tree they take into no consideration the fact that for centuries physicians have been doing exactly the thing that Glenn Frank recommended—trying to teach the public how to keep itself well, and how to prevent disease in itself, and in the individual.

Especially in the last quarter of a century has this work of prophylaxis been going on. Not to make an example of Glenn Frank, but because his viewpoint is so common among men, women and institutions who for the first time have heard of prophylaxis and so think their discovery an original one, it mgiht be well to glance in resume at the tenets set forth by Dr. Frank.

Now in part, said Glenn Frank in addressing the American College of Surgeons in reference to state medicine. "The prevailing attitude actually puts a premium upon disease rather than health. In the main, doctors still secure their income from curing sick folks, not from advising well folk how to keep well. But until the people are educated away from an attitude that obliges doctors to make the major part of their income from attending cases of sickness, our only hope of a healthier nation—unless we are to go over bag and baggage to state medicine —lies with the unselfish doctor who will consciously reduce his income by foisting upon sick patients health advice that may keep them from falling sick again." Where is the ethical doctor who has not been doing that all along?

"This change in public attitude can be brought about in one or two ways," continues Mr. Frank. "First by a deliberately organized and persistently promoted nationwide educational campaign by the physician, or by a vast high-powered machine of state medicine or its equivalent."

Now, what do you think of that? Does Glenn Frank seem unbiased?

Evidently Mr. Frank has not taken the trouble to find out what the medical profession is doing to meet these problems he mentions. The American Medical Association and the State Societies have been talking about the "Periodic Health Examination" and showing the public how such an examination will reveal certain defects before they become serious. Why has the medical profession promoted the Pre-School Child Examination, if not for the good of the child and the public in general? These examinations bring in much less revenue to the physician than long drawn out illness and also more professional gratification. Why has the medical profession talked so much about the early danger signals of cancer? Prophylaxis, prophylaxis—that is now and long has been the profession's —aye hourly watch word.

Many of the state societies are carrying on a very definite program of education for the laity. In Illinois we are sending hundreds of speakers every year to women's clubs, men's clubs and to practically all lay groups in the state. Such lectures are for the purpose of advising *well people how to keep well.* The medical societies are spending money on these programs. We are trying to keep the public informed through the right kind of educational articles in the newspapers, through health poster exhibits and moving picture films.

Illinois did not accept the Sheppard-Towner Act—yet we have a low infant and maternal death rate compared to some states which accepted this Bill. The medical society of the state has devoted portions of its annual meeting to obstetrical papers. It has sent obstetricians to the component county societies to give practical papers. It has worked with the State Depart-

ment of Health in making a study of the infant and maternal statistics in some counties.

Glenn Frank goes on to say that "As a general principle I dislike to see any activity fall into the hands of the government. That applies to any activity if such can be administered equally well or better by the trade or profession to which the activity logically belongs. Society never faces the dilemma of choice between an inner or outer control of its fundamental services. I prefer inner control for the reason that, as modern society becomes increasingly complex and technical, the man on the job should be better equipped for the job than the man on the sidelines. It is, I think, an intelligently progressive policy to consider government control of fundamental services only when inner control breaks down or plays truant to its responsibility."

The medical profession is standing together. It is trying to work out its own problems. The Committee on the Cost of Medical Care which has the co-operation of the American Medical Society is endeavoring to secure facts and figures which will help solve this tremendous question that affects us all. The public cannot make such a survey. Nor could it use it if it had it.

In Illinois, the Chicago Medical Society has even gone so far as to outline and arrange for lectures to the senior medical students and the interns on such subjects as medical economics, medical legislation, and medical organization.

Now, a great many persons who may feel, as did Glenn Frank, that the medical profession has been, was and is neglecting a patent simple remedy for a patent simple defect surely need to be set right on this question. The medical profession is ever alert and updoing for the best interests of humanity and human problems. The very protection Glenn Frank wished to arrange for, was arranged and functioning long ago.

DR. EDWARD H. OCHSNER IS PREPARING A BROCHURE ON THE PROPER DISTRIBUTION OF WEALTH

Dr. Edward H. Ochsner, Chicago's notable surgeon, an outstanding authority on medical economics, is engaged in the preparation of a brochure on the distribution of wealth.

A basically sound article along the lines indicated is timely. Few men, if any, are as qualified to make such a digest as is Dr. Ochsner. In economics, as well as in medicine, Dr. Ochsner stands accredited as an expert. His research and analysis in chrematistics cover conditions existing both at home and abroad. His dissecting eye and capable judgment will interpret for the less informed the salient inefficiencies of such apologetic remedies for economic evils as the Dole system current in England; compulsory health insurance in Germany; and other distorted ideas of pseudo brotherhood of wealth. Among these last must be mentioned the installation in the United States of institutions that aim at the distruction of self respecting citizenhood while seeming to dispense civic benefaction. Most glaring of these evils are embodied in those philanthropies that find expression in paternalistic measures against the ethical practice of medicine. The majority of these endeavors are thoroughly socialistic in nature especially such efforts as the endowment of huge foundations for the free medical care not only of the poor but also of the well-to-do. Isn't it odd that those who advocate such philanthropy among those who have medical bills to meet have never gained their wealth from the practice of medicine but rather from commercial pursuits. It seems never to occur to these would-be philanthropists to return their wealth to the sources from which it has come providing by endowments through which the well-to-do, let alone the poor, can obtain free coal, clothes, or housing. The man who makes his money from a coal mine if he wants to give it away should give away free coal instead of free medical care to those well able to pay.

MEDICAL SOCIALISM PROMOTES WHOLESALE MALINGERING

The A. M. A. regular London correspondent under date of August 16, 1930, has the following to say relative to medical socialism in relation to wholesale malingering. We quote:

MEDICAL SOCIALISM PROMOTES WHOLESALE MALINGERING

All socialistic attempts to make the community to what individuals should do for themselves have proved failures. The lesson may be read in the failure of the communal system of the pilgrim fathers, tried after they landed in America, as well as in Russia today. Our "national health

insurance" is a gigantic scheme of medical socialism. Here is the report of the cautious official of the ministry of health, anxious not to say too much. "It is difficult to avoid the presumption that the habit of making unnecessary claims has set in and has steadily grown." Attempts are made by labor politicians to blink this fact. In an editorial, the position is revealed by the *Birmingham Medical Review:* "The habit of making unnecessary claims is well known to every panel doctor. In a way he is responsible, for he writes the certificates on which the claim is based. But, poor devil, he is in an impossible position. Authority has created the position. Aided by Authority, the suppliant for benefit holds the whip hand every time. He can demand the certificate with the threat 'Give me what I want or I'll change my doctor.' The highbrow people with fixed official salaries shake their heads when told that panel doctors cannot afford to resist doubtful claims. But the panel doctor knows from much painful experience that the happiness of himself and his family must depend on whether he is or is not popular with the insured population. And popularity depends only very slightly on professional capacity; almost entirely on willingness to accede to demands. The man who will deal out prescriptions and sickness certificates without questioning is popular. He gets the big panel. His more particular brother finds his panel dwindling. The newspapers have been trying to show that the panel patient seeking a rest is a model of everything a patient should be; that his physical condition is undermined by unemployment and consequently he is entitled to sickness benefit. It is not true." This may be compared with the experience of Germany, the pioneer of medical socialism. Dr. Erwin Lick, in his book, "The Doctor's Mission," says that the German system of medical insurance has promoted wholesale malingering to obtain incapacity payments. Again, in New Zealand the proposal to introduce medical insurance is opposed both by the profession and by the public. A leading journal, the *Dominion,* says: "It is not only that great bureaucracies grow up and fatten on such schemes, but that the so-called beneficiaries are morally debauched, losing self-reliance and independence."

DR. CHARLES B. REED TELLS THE TRUE STORY OF LADY GODIVA

Four scintillant rainbow gems from the brain of that distinguished litterateur, Dr. Charles B. Reed, appear in an especial, numbered autographed edition of nine hundred and fifty copies. Under the title of "The True Tale of Lady Godiva," Dr. Reed presents to his public, not only this whimsical development of the famous British legend, as narrated by "The Antiquarian," but also from "A Gentleman of the Cloth," the story of "The Tomb of the Prophet," from "The Missionary," the story of "The Porcelain Cup," and the Indian legend of the Lake Superior region, "The Green Plume."

Dr. Reed's mother, the late Elizabeth Reed, was one of the most famous women of this and of her own generation where occult research and theosophical studies are concerned. Some of his mother's esoteric subtlety seems to have become the legitimate heritage of her richly endowed son. The stories are unforgettable, poignant and pleasing. Perhaps of them all "The Tale of the Prophet" will be most likely to please the largest audience.

As unique as the savour of the volume, is its dress. The Bodleian Press designed and printed the 94 pages on hand made paper. The frontispiece and decoration are from the hand of the inimitable Allen Philbrick, and the binding boasts the exceptional craftsmanship of Samuel Zonne. Of marbleized paper in rainbow hues as emphatic as the clever tales within, the book cover is backed by dark green cloth on which runs a rich design in heavy gold leaf. Announcement is made that plates and type have been destroyed and that no future editions will be published. For sale by subscription only, the volume demands attention for its literary artistry as well as for its naive expression of the story-teller's craft.

A SPECIAL NUMBER OF RADIOLOGICAL REVIEW

The March, 1931, issue of *The Radiological Review* (Chicago) is devoted entirely to Radium, and is the fourth annual "Radium Number" of this publication.

All the articles are written exclusively for this issue, and collectively, they can be considered to present the present status of Radium Therapy as practiced in this country. The presentations

are from among the leading radium therapists of America and include such names as Healey, Levin, Kaplan, Eller and Fox of New York, Simpson of Chicago, Quigley of Omaha, Withers of Denver, Keith of Louisville, Murphy of Minneapolis, Bowing and Fricke of Rochester, Minnesota, et al.

Interest in radium is not on the wane, but on the contrary is becoming more firmly established in our armamentarium. While it is true that radium is useful in a comparatively small number of afflictions to which the human body is heir, it is so effective that it is truly "invaluable." Who will deny the remarkable results achieved by radium in the treatment of skin cancer, menopausal uterine hemorrhage, carcinoma of the cervix, and certain types of nevi?

DR. W. J. MAYO OPPOSES LONG PRE-MEDICAL WORK

"The present system of medical education is faulty in that it consumes too much of the student's time." So declared Dr. William J. Mayo of the Mayo clinic, Rochester, Minn., in a recent address before physicians attending the annual congress on medical education, licensure and hospitals under auspices of the American Medical association at the Palmer house, Chicago, Ill.

"The period of from two to four years of university study, required of the student before he begins his medical course, dulls the mind and leaves the physician at the comparatively advanced age of 30 years before he begins practicing," Dr. Mayo pointed out. He advocated a substitution of the four quarter system to save the student two years or more in his course.

Dr. Mayo questions the wisdom of the prevailing system of examinations and the inflexible curricula the medical schools offer.

"The body of medical knowledge is so large that an almost superhuman intellect is required to assimilate it," he declared. "Yet the medical student feels he must be sufficiently familiar with various laboratory and clinical specialties to pass examinations in them."

"Unconsciously the instructor wields the medical degree as a club to compel the student to remember the subjects taught by use of a cramming process rather than to allow the student to acquire a thorough understanding of the subject matter."

Earlier contact with patients for the student would be a desirable advance in medical education, Dr. Mayo believes.

A UNIQUE EUROPEAN CLINIC TOUR

A four-page insert in the advertising section of the JOURNAL this month announces a European Clinic Tour built along quite original lines and sponsored by the State Medical Journals. It differs from the traditional clinic tour in two very conspicuous ways: the individual clinic service by which a man is enabled to see in each city the things that most immediately concern him, and the new range of choice in the matter of transportation. We have joined with the other State Journals in the organization of this party because we believe that the features just mentioned will appeal very strongly to doctors of independent habit of mind and also because it enables us to offer to the members a tour at practically wholesale prices.

The foreign arrangements for the tour are being supervised by B. W. Van Riper, Ph.D., Vice-President of the Travel Guild of America. He has had wide experience in this field including the memorable tour under the leadership of Dr. Chas. Mayo in 1925, the most successful of all clinic tours down to date. Of especial interest in connection with this tour is the offer of transportation by de luxe private automobile at prices little higher than by rail. This will appeal very strongly to all who appreciate the enormously enhanced convenience and sightseeing value of motor travel.

Those who already have it more or less in mind to take a vacation abroad this summer will find the Cooperative Tour very much worth investigating. The Travel Guild has prepared a beautiful booklet describing the tour which will be sent to anyone upon request. Information may also be obtained from any office of the Canadian Pacific Steamship Services, since the party is scheduled to sail on the excellent cabin ships of this company, or of the Travel Guild, 180 N. Wabash Ave., Chicago, Ill., under whose management the tour is operated.

ILLINOIS STATE MEDICAL SOCIETY
EIGHTY-FIRST ANNUAL MEETING

EAST ST LOUIS, ILLINOIS

MAY 5, 6, 7, 1931

OFFICERS

William D. Chapman, President.....Silvis
R. R. Ferguson, President-Elect.....Chicago
B. G. Wilcox, 1st Vice-President .....Joliet
Otto Huber, 2nd Vice-President.....Chicago
A. J. Markley, Treasurer.....Belvidere
Harold M. Camp, Secretary.....Monmouth

THE COUNCIL

E. H. Weld, First District.....Rockford
E. E. Perisho, Second District.....Streator
J. S. Nagel, Third District.....Chicago
F. R. Morton, Third District.....Chicago
Thos. P. Foley, Third District.....Chicago
E. P. Coleman, Fourth District.....Canton
S. E. Munson, Fifth District.....Springfield
Chas. D. Center, Sixth District.....Quincy
I. H. Neece, Seventh District.....Decatur
Cleaves Bennett, Eighth District...Champaign
J. W. Hamilton, Ninth District....Mt. Vernon
J. S. Templeton, Tenth District..Pinckneyville
Cleaves Bennett, *Chairman* of Council.

ILLINOIS MEDICAL JOURNAL

Charles J. Whalen, Editor.....Chicago
Henry G. Ohls, Managing Editor.....Chicago
J. W. VanDerslice, Secretary, Publication Committee ..... Oak Park
Irving S. Cutter, Permanent Historian..... ..... Chicago

STANDING COMMITTEES

PUBLIC POLICY

Frederick H. Mueller, *Chairman*.....Chicago
H. J. Way.....Chicago
George Michell .....Peoria

MEDICAL LEGISLATION

John R. Neal, *Chairman*.....Springfield
Chas. E. Humiston.....Chicago
Edward Bowe .....Jacksonville

MEDICO-LEGAL

J. R. Ballinger, *Chairman*.....Chicago
George Weber, *Secretary*.....Peoria
R. O. Hawthorne .....Monticello
Walter Wilhelmj .....East St. Louis
A. H. Geiger.....Chicago
Oscar Hawkinson .....Chicago

RELATIONS TO THE PUBLIC HEALTH ADMINISTRATION

E. W. Mosley, *Chairman*.....Chicago
Ralph Hinton .....Elgin
E. D. Levisohn .....Chicago
F. F. Maple .....Chicago
T. B. Knox .....Quincy

MEDICAL EDUCATION AND HOSPITALS

John J. Pflock .....Chicago
W. M. Hartman.....Macomb
W. R. Marshall .....Clinton

COUNCIL COMMITTEES

EDUCATIONAL COMMITTEE

R. R. Ferguson, *Chairman*.....Chicago
Chas. J. Whalen.....Chicago
William D. Chapman .....Silvis
James H. Hutton .....Chicago
Jean McArthur, *Secretary*.....Chicago

SCIENTIFIC SERVICE COMMITTEE

James H. Hutton, Chairman.....Chicago
William D. Chapman .....Silvis
R. R. Ferguson.....Chicago
Harold M. Camp, *Secretary*.....Monmouth

SECTION OFFICERS

SECTION ON MEDICINE

Lowell D. Snorf, *Chairman*.....Chicago
Warren Pearce, *Secretary*.....Quincy

SECTION ON SURGERY

J. H. Bacon, *Chairman*.....Peoria
Jas. T. Gregory, *Secretary*.....Chicago

SECTION ON EYE, EAR, NOSE AND THROAT

Harry S. Gradle, *Chairman*.....Chicago
W. C. Williams, *Secretary*.....Peoria

SECTION ON PUBLIC HEALTH AND HYGIENE

Charles H. Miller, *Chairman*.....Chicago
Arlington Ailes, *Secretary* .....LaSalle

SECTION ON RADIOLOGY

Henry W. Grote, *Chairman*.....Bloomington
E. L. Jenkinson, *Secretary* .....Chicago

SECRETARIES' CONFERENCE

I. L. Foulon, *President*.....East St. Louis
W. D. Murfin, *Vice-President*.....Decatur
Harold Swanberg, *Secretary* .....Quincy

COMMITTEE ON ARRANGEMENTS

I. L. Foulon, *General Chairman*..East St. Louis
G. C. Otrich, *Secretary*.....Belleville

CONTACT COMMITTEE

F. Gunn, *Chairman*.....East St. Louis

W. Crotty .....East St. Louis
J. Fulgham .....East St. Louis
O. Klug .....East St. Louis

ENTERTAINMENT COMMITTEE

O. W. Knewitz, *Chairman*.....East St. Louis
A. B. McQuillan.....East St. Louis
C. E. Hill.....East St. Louis
O. J. Culbertson.....East St. Louis
R. F. Stanton .....East St. Louis
E. H. Trippel .....O'Fallon

EXHIBITS COMMITTEE

L. A. Ryan, *Chairman*.....East St. Louis
O. H. McCann.....East St. Louis
H. H. Tanzer .....East St. Louis

FINANCE COMMITTEE

R. Tharp, *Chairman*.....East St. Louis

INFORMATION AND HOTELS

J. J. Donahue, *Chairman*.....East St. Louis
C. Wilson .....Belleville
W. Wilhelmj .....East St. Louis

MEETING PLACE

H. A. Cables, *Chairman*.....East St. Louis
M. E. Brennan.....East St. Louis
John Gunn .....Belleville

PRESIDENT'S DINNER

H. M. Voris, *Chairman*.....East. St. Louis
C. E. Hill .....East St. Louis
W. Crotty .....East St. Louis
E. H. Holten .....East St. Louis
L. E. Wedel .....East St. Louis

RECEPTION COMMITTEE

C. S. Skoogs, *Chairman*.....East St. Louis
H. H. Hurd .....East St. Louis
Ed Bechtold .....Belleville
PJ. H. Fulgham.....East St. Louis

PUBLICITY COMMITTEE

W. Griffith, *Chairman* .....East St. Louis
E. H. Wangelin.....Belleville
R. Campbell .....East St. Louis
T. V. Boyd .....East St. Louis

REGISTRATION COMMITTEE

M. E. Brennan, *Chairman*.....East St. Louis
C. E. Eisele.....East St. Louis
L. L. Madden .....East St. Louis
H. H. Hurd.....East St. Louis
A. M. Aszmann .....East St. Louis

TRANSPORTATION COMMITTEE

T. V. Boyd, *Chairman*.....East St. Louis
O. B. Boyd .....East St. Louis
W. Griffith .....East St. Louis
E. H. Holton .....East St. Louis

LADIES ENTERTAINMENT

LADIES ENTERTAINMENT COMMITTEE

Mrs. O. J. Culbertson, *Chairman*.East St. Louis
Mrs. A. S. Aszmann.....East St. Louis
Mrs. I. L. Foulon.....East St. Louis
Mrs. L. E. Wedel.....East St. Louis
Mrs. H. Voris.....East St. Louis
Mrs. Harvey Smith.....East St. Louis
Mrs. W. McNary.....East St. Louis
Mrs. C. P. Renner.....Belleville
Mrs. E. Bechtold .....Belleville
Mrs. H. J. Frein.....Belleville
Mrs. G. C. Otrich.....Belleville

WOMEN'S AUXILIARY TO ILLINOIS STATE MEDICAL SOCIETY

President—Mrs. R. K. Packard, 6901 Paxton Avenue, Chicago.

President-Elect—Mrs. T. O. Freeman, Mattoon.

First Vice-President—Mrs. George W. Post, Jr., 1206 Ashland Avenue, River Forest.

Second Vice-President—Mrs. E. M. Stevenson, Bloomington.

Third Vice-President — Mrs. Earl Steen, Joliet.

Recording Secretary—Mrs. Frank Maple, 6728 Paxton Avenue, Chicago.

Corresponding Secretary—Mrs. F. P. Hammond, 6020 Drexel Ave., Chicago.

Treasurer—Mrs. A. H. Brumback, 1503 W. Jackson Blvd., Chicago.

COUNCILORS

Dist. 1—Mrs. H. H. West, Elgin.

Dist. 2—Mrs. C. H. Ives, Dixon.

Dist. 3—Mrs. P. B. Blodgett, Chicago Heights; Mrs. P. H. Kreuscher, 5816 Blackstone Ave., Chicago; Mrs. J. R. Harger, 544 N. Kenilworth Ave., Chicago.

Dist. 4—Mrs. W. D. Chapman, Silvis.

Dist. 5—Mrs. Fredk. P. Cowdin, 1900 Wiggins Ave., Springfield.

Dist. 6—Mrs. W. A. Brittin, Virden.

Dist. 7—Mrs. Theodore Thompson, Shelbyville.

Dist. 8—Mrs. E. S. Allen, Arcola.

Dist. 9—Mrs. C. O. Lane, West Frankfort.

Dist. 10—Mrs. C. O. Boynton, Sparta.

CHAIRMAN OF COMMITTEES

Organization—Mrs. W. D. Chapman, Silvis.

Press and Publicity—Mrs. Louis Ostrom, Rock Island.

Legislation—Mrs. D. J. Evans, Aurora.

Printing—Mrs. G. Henry Mundt, Chicago.

Social—Mrs. R. R. Ferguson, Chicago.

Program—Mrs. George W. Post, Jr., River Forest.

Credentials—Mrs. Floyd Phillips, Arthur.

Revisions—Mrs. F. H. Pirnat, Chicago.

Public Relations—Mrs. A. H. Baugher, Chicago.

Registration—Mrs. J. R. Harger, Oak Park; Mrs. S. E. Allen, Arcola.

HEADQUARTERS—Broadview Hotel.

REGISTRATION BOOK—Ainad Temple.

WOMEN'S AUXILIARY

PROGRAM FOR STATE MEETING

Tuesday, May 5, 1931

10:00 a. m.—State Board meeting.

11:30 a. m.—Meeting of county presidents with President-Elect Mrs. Freeman.

1:30 to 4:00 p. m.—Trip to Forest Park, St. Louis, visiting Lindberg museum and the zoo.

4:00 to 6:00 p. m.—Tea.

7:00 p. m.—Dinner for board members and county presidents.

8:00 p. m.—Opening meeting Illinois State Medical Society followed by illustrated lecture on "Travels in Africa."

Wednesday, May 6, 1931

9:00 a. m.—Opening meeting of the Auxiliary.

1:00 p. m.—Annual luncheon at St. Clair Country Club.

Installation of the new president.

Bridge and golf.

6:00 p. m.—Joint dinner with the men "President's Dinner," Knights of Columbus Hall.

Thursday, May 7, 1931

10:00 a. m.—Meeting of the new Board with Mrs. Freeman.

LADIES' ENTERTAINMENT

The details relative to entertainment of ladies attending the meeting with the exception of the auxiliary program, have not yet been announced, but will be given in detail in the official program to be published in the April JOURNAL.

SECRETARIES' CONFERENCE

Shrine Temple

I. L. Foulon, President.

W. D. Murfin, Vice-President.

Harold Swanberg, Secretary.

PROGRAM

Tuesday Morning, May 5, 1931

10:00—"Public Relations of the County Medical Society," Nathan S. Davis, III, Chicago.

"Some of the Burdens of the County Society Secretary and a Few Rewards," E. J. Goodwin, St. Louis, secretary, Missouri State Medical Association.

"The Challenge of Syphilis," Andy Hall, Springfield.

"The Educational Committee and Its Relation to the County Medical Society," Miss Jean McArthur, Chicago.

"The Economic Trend and Imperative Need for Change in Method and in the Attitude of Present Medical Practice," C. D. Center, Quincy.

The annual secretaries' banquet will be held on Tuesday evening, May 5, 1931. Complete details will be announced in the official program.

MEETING OF THE HOUSE OF DELEGATES

Tuesday Afternoon, May 5, 1931

3:00—Meeting called to order by the President, William D. Chapman, for reports of officers, the council committees, and to transact other business to come before the House.

Thursday Morning, May 7, 1931

8:30—Meeting called to order by the President for election of officers, councilors, committees, delegates to the American Medical Association, report of resolutions committee and for the transaction of other business that may come before the House.

At the close of this meeting, the President-Elect, R. R. Ferguson, will be inducted as President of the Illinois State Medical Society.

GENERAL SESSIONS

Shrine Temple

Tuesday Evening, May 5, 1931

7:30—Meeting officially opened by the President, William D. Chapman.

Invocation.

Address of Welcome—Mayor of East St. Louis.

Address of Welcome—President, St. Clair County Medical Society.

Address—To be announced.

Wednesday Afternoon, May 6, 1931

1:15—"Aviation Medicine." Louis H. Bauer, Hempstead, L. I. New York. (By Invitation.)

2:00—Oration in Surgery. Evarts A. Graham, Professor of Surgery, Washington University School of Medicine, St. Louis. "Lowering the mortality in operations on the Biliary Tract."

Wednesday Evening, May 6, 1931

7:30—President's address. William D. Chapman, President, Illinois State Medical Society. Silvis.

8:00—Oration in Medicine. To be announced.

These addresses follow the President's Dinner at the Knights of Columbus Building.

President's Dinner

The Annual President's Dinner will be held at the Knights of Columbus Building on Wednesday evening, May 6, 1931, at 6:30. This is an interesting function honoring our President, William D. Chapman, and the Past Presidents of the Illinois State Medical Society who will be guests at the dinner. It is hoped that every member and guest at the meeting will attend this dinner.

Dr. F. O. Fredrickson, the immediate past President, will preside as Toastmaster. A suitable dinner program will be arranged by the committee.

Tickets for the dinner can be procured at the Registration Desk from any member of the President's Dinner Committee. The President's address and Oration in Medicine will follow the dinner, the meeting in charge of the First Vice-President, B. G. Wilcox.

The Stag

After the opening meeting on Tuesday evening, May 5, 1931, the St. Clair County Medical Society will be host to the visting members and guests. The nature of the program and entertainment will be announced later.

Section Programs

section on medicine

Shrine Temple

Lowell D. Snorf, *Chairman.*

Warren Pearce, *Secretary.*

Tuesday Afternoon, May 5, 1931

This Section will join with other sections for a joint meeting, which will consist of talks and clinics given by invited guests. Program not yet completed.

Wednesday Morning, May 6, 1931

9:00—Results in the Treatment of Allergic Diseases, Samuel J. Taub, Chicago.

9:30—Chairman's Address. (Subject to be announced.) Lowell D. Snorf, Chicago.

10:00—General Practitioner's Attitude to the Recovered Mental or Nervous Case, S. N. Clark, Jacksonville.

10:30—(Subject to be announced), J. P. Simonds, Chicago.

11:00—Anemia, Richard F. Herndon, Springfield. Discussion opened by S. R. Hoover, Quincy.

11:30—Tuberculosis of the Skin, Cleveland J. White, Chicago.

Wednesday Afternoon, May 6, 1931

2:00—Luetic Aortitis, L. Feldman, Chicago.

2:30—Coronary Thrombosis, Walter S. Priest, Chicago.

3:00—Trauma as a Cause of Heart Disease, Fred M. F. Meixner, Peoria.

3:30—Chronic Vascular Occlusion of the Extremities, G. De Takats, Chicago.

4:00—Diabetes, Walter Nadler, Chicago.

Thursday Morning, May 7, 1931

9:00—Pediatrics Talk. (Subject to be announced.) Gerald M. Cline, Bloomington. Discussion opened by H. S. Maupin, Quincy.

9:30—A Review of Some of the Advances in Gastro-Intestinal Diseases, Joseph G. Beykirch, East St. Louis.

10:00—Clinical Significance of Roentgenological Findings of the Stomach and Duodenum, Sidney Portis, Chicago.

10:30—(Subject to be announced.) John Carey, Joliet.

This program will be re-arranged and completed for the official program publication in the April Journal.

Dr. A. C. Ivy, Professor of Physiology, Northwestern University Medical School, Chicago, will appear before the Joint session.

"Observations on the Emptying of the Gall Bladder;" Illustrated by Motion Pictures.

SECTION ON SURGERY

J. H. Bacon, *Chairman.*

Jas. T. Gregory, *Secretary.*

Tuesday, May 5, 1931

Shrine Temple

1:00—6:00.

General meeting of Sections, at which guest speakers will present an interesting program.

1. Ernest Sachs, Washington University, School of Medicine, St. Louis, Dry Clinic—Spinal Cord Lesions.

2. Wm. D. Gatch, University of Indiana, School of Medicine, Indianapolis, Different Phases of Intestinal Obstruction.

3. Multiple Infections Within the Abdomen.

a. Histories, Ellsworth Black, Jacksonville.

b. Deductions, Carl E. Black, Jacksonville.

Other speakers for this interesting session will be announced in the official program.

Wednesday, May 6, 1931

Shrine Temple

9:00—Acute Pancreatitis, P. E. Hopkins, Chicago.

9:30—The Treatment of Injuries to the Kidneys, Harry C. Rolnick, Chicago.

10:00—The Role of Prophylaxis in Obstetrics, Frank F. Maple, Chicago.

10:30—Multiple Myeloma, Chas. D. Center, Quincy.

11:00—The Maggot Treatment of Osteomyelitis, Jacob Myers and Leo Czaja, Chicago.

3:00—The Diagnosis of Hyperthyroidism, E. P. Sloan and Frank Deneen, Bloomington.

4:00—Fractures About the Elbow Joint, Philip H. Kreuscher, Chicago.

4:30—Post-Operative Management of Abdominal Operations, C. David Brown, Chicago.

5:00—Surgical Treatment of Carcinoma of the Colon, George de Tarnowsky, Chicago.

5:30—Subject and speaker to be announced.

Thursday Morning, May 7, 1931

Shrine Temple

9:00—Fractures of the Upper End of the Femur, Frank G. Murphy, Chicago.

9:30—Surgical Treatment of Chronic Arthritis, M. A. Bernstein, Chicago.

10:00—Subject and speaker to be announced.

10:30—Mal-Practice, J. R. Ballinger, Chairman, Medico-Legal Committee, Chicago.

11:00—The Preparation of the Patient for Prostatectomy, Frank M. Phifer, and William H. Holmes, Chicago.

SECTION ON EYE, EAR, NOSE AND THROAT

Shrine Temple

Harry S. Gradle, *Chairman.*

Wright C. Williams, *Secretary.*

Tuesday Afternoon, May 5, 1931

1:00—Surgery of the Structures Related to the Inner Canthus of the Eye. Lantern illustrations. Vilray P. Blair, St. Louis. (By invitation.)

2:00—Fibro-Sarcoma of Orbit and the Kronlein Operation. Report of a case. Lantern demonstration. O. D. Cunningham, Rockford.

Discussion opened by George F. Suker, Chicago.

2:20—Embryonic Development of the Nasal Accessory Sinuses, W. L. Hanson, East St. Louis.

2:40—Congenital Dacrocystitis, Harry Woodruff, Joliet.

Discussion opened by Ralph Fox, Bloomington.

3:00—Dust Sensitization in Relation to Hay Fever, L. B. Bernheimer, Chicago.

Discussion opened by Myron E. Kahn, Chicago.

3:20—Recurrent Hemorrhages Into the Vitreous. (Eale's Disease?) Report of a case. W. R. Fringer, Rockford.

Discussion opened by H. W. Woodruff, Joliet.

3:40—Transient Hyperopia and Reduced Accommodation in Diabetes Mellitus, C. W. Geiger, Kankakee.

Discussion opened by E. C. Spitze, East St. Louis.

4:00—The Effects of Diathermia Upon Deafness, M. R. Guttman and Max Kulvin, Chicago.

Discussion opened by C. D. Sneller, Peoria.

4:20—Sinus Surgery. Subject to be announced, Howard Ballenger, Chicago.

4:40—Phlyctenular Conjunctivitis, Beulah Cushman, Chicago.

5:00—Edema of the Larynx. Lantern demonstration. C. D. Sneller, Peoria.

6:30—Annual Banquet of the Section with Illustrated Lecture by Richard L. Sutton, Kansas City, on "Big Game Hunting."

Wednesday Morning, May 6, 1931

9:00—Refinements in Surgery of the Tonsils Including Electro-Surgery. Illustrated by motion pictures. F. B. Balmer, Chicago.

9:20—Electro-Surgical Extirpation of the Tonsils in the Tuberculous. Preliminary report. A. R. Hollender, Chicago.

Discussion opened by Francis L. Lederer, Chicago.

9:40—Subject and speaker to be announced.

10:00—Choked Disc and Optic Neuritis. A photographic demonstration. Arthur J. Bedell, Albany, N. Y. (By invitation.)

11:00—Experiences with Chronic Deafness, W. V. Mullin, Cleveland. (By invitation.)

Wednesday Afternoon, May 6, 1931

1:15—Aviation Medicine, with Special Reference to the Special Examinations, Col. Louis H. Bauer, former medical director, Bureau of Aeronautics Department of Commerce, Hempstead, Long Island, N. Y. (By invitation.)

This address will be given at a General Session, immediately preceding the Oration in Surgery.

2:00—Oration in Surgery. (General Session.)

Immediately following the Oration in Surgery, the members of this section will be provided with transportation to the new McMillan Hospital, the Eye, Ear, Nose and Throat Department of the Washington University School of Medicine, St. Louis, where the section will be guests of Dr. Howard and Dr. Dean.

SECTION ON PUBLIC HEALTH AND HYGIENE

Chas H. Miller, *Chairman.*

Arlington Ailes, *Secretary.*

Tuesday Afternoon, May 5, 1931

1:00—Heart Disease—Prevention and Aftercare, I. C. Riggin, Executive Secy., American Heart Association, New York City. (By invitation.)

These talks will be given at a Joint Session, with other Sections.

Wednesday Morning, May 6, 1931

8:30—Some Experimental Work in Anterior Poliomyelitis, H. J. Shaughnessey, Springfield.

8:50—Treatment of Anterior Poliomyelitis with Immune Serum, H. A. Orvis, Winnetka.

Discussion opened by Lloyd Arnold, Chicago.

MENTAL HYGIENE SYMPOSIUM

9:30—Feeble-Mindedness in Illinois. Illustrated by motion pictures. Groves B. Smith, Beverly Farm.

10:00—Mental Hygiene in the Home, Frank P. Norbury, Jacksonville.

10:20—Facilities for Treatment of Mental Disease and Cost, Charles F. Read, Elgin.

11:00—Diagnosis—Clinical Demonstration of Clauses of Mental Diseases, Ralph C. Hamill, Chicago.

Wednesday Afternoon, May 6, 1931

3:00—Modern Psychiatry and Criminology, Meyer Solomon, Chicago.

3:20—Shall Mental Disease Come Under Public Health Regulation, Arnold H. Kegel, Commissioner of Health, Chicago.

3:40—Heat Therapy in Paresis, Sidney Wilgus, Rockford.

4:00—Discussion—Symposium.

1. Diagnosis, F. J. Gerty, Chicago.
2. Prevention, W. A. Evans, Chicago.
3. Care, H. Douglas Singer, Chicago.
4. Crime, Judge John P. McGoorty, Chief Justice, Criminal Court of Cook County, Chicago. Judge Sonsteby, Municipal Court, Chicago. Arnold H. Kegel, Commissioner of Health, Chicago.

Thursday Morning, May 7, 1931

8:30—Public Health Aspects of the Cancer Problem, Roswell T. Pettit, Ottawa.

Discussion opened by Gilbert Fitzpatrick, Chicago.

9:00—Aspects of Medical Quackery, Henry R. Krasnow, Chicago.

Discussion opened by Arthur J. Cramp, American Medical Association, Chicago.

9:30—Factors in Tuberculosis Which Make It a Public Health Problem, D. D. Monroe, Edwardsville.

Discussion opened by R. W. Dunham, Ottawa.

10:00—Value in Bedside Nursing in a Public Health Program, Margaret McGreevy, R. N., LaSalle.

Discussion opened by Mrs. Irene McCullough, Director of Nurses, Metropolitan Life Insurance Company, Chicago.

10:30—Trends in Public Health Work, Allen J. McLaughlin, Chicago.

Discussion opened by I. D. Rawlings, Chicago.

SECTION OF RADIOLOGY

Shrine Temple

Henry W. Grote, *Chairman.*

E. L. Jenkinson, *Secretary.*

Wednesday, May 6, 1931

9:00—Meeting called to order by Chairman of Section.

9:10—Early Recognition of Gas Bacillus Infection by X-ray—Report of Several Cases and Recovery, Harry Olin, Chicago.

Discussion opened by G. E. Morgan, Monticello.

9:30—X-Ray and Radium in Malignancy, L. R. Sante, St. Louis, Missouri. (By invitation.)

Discussion opened by E. L. Jenkinson, Chicago.

9:50—The Present Status of the Treatment of Carcinoma of the Uterine Cervix—a Resume of Methods Used and Results Achieved in Leading European Clinics, R. T. Pettit, Ottawa.

Discussion opened by Henry Schmitz, Chicago.

10:10—X-ray Aspect of Gastric Carcinoma, James T. Case, Chicago.

Discussion opened by C. U. Collins, Peoria.

10:30—Gall Bladder—Cholecystography Versus the Primary Film Method, Robert A. Arens, Chicago.

Discussion opened by Perry Goodwin, Peoria.

10:50—Interpretation of X-ray Reports for General Medical and Surgical Practitioners, E. H. Skinner, Kansas City, Missouri. (By invitation.)

Discussion opened by Max Hubeny, Chicago.

11:10—Subject to be announced. Edwin C. Ernst, St. Louis, Missouri. (By invitation.)

Discussion opened by W. G. Bain, Springfield.

11:30—Evaluation of Radiology in Pediatrics, Gerald M. Cline, Bloomington, and John R. Vonachen, Peoria.

Discussion opened by Harold Swanberg, Quincy.

11:50—Election of Officers for the Section for coming year.

Thursday, May 7, 1931

9:10—Roentgenotherapy of Conditions Other Than Malignancy, I. S. Trostler, Chicago.

Discussion opened by E. G. C. Williams, Danville.

9:30—The Value of X-ray Therapy in Malignant Diseases, Cassie Rose, Chicago.

Discussion opened by I. S. Trostler, Chicago.

9:50—Treatment of Breast Carcinoma, B. H. Orndoff, Chicago.

Discussion opened by J. K. P. Hawks, Bloomington.

10:10—Definite Case Report on Rubin Method—Exhibition of End Result, F. Flinn, Decatur.

Discussion opened by B. H. Orndoff, Chicago.

10:30—X-Ray Therapy in Skin Diseases, Arthur W. Erskine, Cedar Rapids, Iowa. (By invitation.)

10:50—Phrenic Exeresis in the Treatment of Pulmonary Tuberculosis, George M. Landau, Chicago.

Discussion opened by Jerome Head and Otto Schlack, Chicago.

11:10—X-ray Diagnosis of Thoracic Pathology, Herman Cole, Springfield.

The Roentgen Diagnosis of Bronchiectasis, Adolph Hartung, Chicago.

Discussion of these papers opened by L. R. Sante, St. Louis. (By invitation.)

11:50—Installation of Officers for coming year.

RULES GOVERNING THE PRESENTATION OF PAPERS

All papers read by members shall be limited to twenty minutes and remarks in discussion to five minutes, floor privilege being allowed only once for the discussion of any one subject.

All papers read before the Society or any of its Sections shall become the property of the Society. Each paper shall be deposited with the Secretary of the Section when read and the presentation of a paper to the Illinois State Medical Society shall be considered tantamount to the assurance on the part of the writer that such paper has not already appeared and will not appear in medical print before it has been published in the ILLINOIS MEDICAL JOURNAL.

A paper not heard in its scheduled turn shall be held subject to the call of the Chairman of the Section at the end of the regular session if time permits, or as an alternative at the end of the program.

All subjects shall be confined strictly to the subject in hand.

No paper shall appear in the printed transactions of the meeting unless read in full or in abstract.

(From the By-Laws of the Illinois State Medical Society.)

EXHIBITORS AT 1931 ANNUAL MEETING

American Medical Association, 535 North Dearborn Street, Chicago.

A. S. Aloe Company, 1819 Olive Street, St. Louis.
Chicago Health Department, Chicago.
DePuy Manufacturing Company, Warsaw, Indiana.
Dick X-Ray Company, St. Louis.
General Electric Corporation, Jackson Blvd. & Robey St., Chicago.
Gerber Products Division, Freemont Packing Company, Freemont, Michigan.
Horlicks Malted Milk Corporation, Racine, Wisconsin.
Huston Brothers Company, 185 North Wabash Avenue, Chicago.
Illinois Department of Public Health, Springfield.
Illinois Tuberculosis Association, Springfield.
Kellogg Company, Battle Creek, Michigan.
Loyola University School of Medicine, Chicago.
W. W. McMaster, Peoria.
Mead Johnson & Company, Evansville, Indiana.
Medical Protective Company, 360 North Michigan Blvd., Chicago.
Mellin's Food Company, 177 State Street, Boston, Mass.
V. Mueller & Company, Ogden Avenue & VanBuren Street, Chicago.
Petrolagar Laboratories, 536 Lake Shore Drive, Chicago.
Chas. H. Phillips Chemical Company, 170 Varick Street, New York City.
Post Graduate School of Surgical Technique, Chicago.
W. B. Saunders Company, West Washington Square, Philadelphia.
Section on Radiology, Illinois State Medical Society.
S. M. A. Corporation, Cleveland, Ohio.
Tailby-Nason Company, Boston, Mass.
University of Illinois School of Medicine, Chicago.
U. S. Fidelity & Guaranty Company, St. Louis.
Vilray P. Blair, St. Louis.
Washington University School of Medicine, St. Louis.

(This list incomplete—will all appear in Official Program.)

SCIENTIFIC EXHIBITS

We expect to have the finest scientific exhibits at the meeting, that we have yet had. The list, and definite showing, yet incomplete.

The American Medical Association will exhibit some very interesting material to show what the Association is doing not only for the Medical Profession, but also showing what it is doing to protect the citizens of our Country.

Council on Pharmacy and Chemistry: Posters and specimens illustrating the efforts of this Council in the interests of scientific medicine and rational prescribing.

American Medical Association Chemical Laboratory: Posters and specimens bearing on such subjects as newer synthetics, comparative prices of proprietary and non-proprietary remedies, and drug control.

Bureau of Investigation: A series of educational posters on the nostrum evil and quackery prepared by the Bureau for the use of physicians, health officials, schools and colleges.

Council on Medical Education and Hospitals: Posters and charts on hospitals for nervous and mental diseases.

Bureau of Health and Public Instruction: Charts and posters of the health education series, of infant welfare series and how the doctor prevents disease.

Bureau of Legal Medicine and Legislation: Posters showing the activities of the Bureau, extent of medical defense activities of constituent associations,—states having basic science requirements,—states having annual registration requirements,—states providing for eugenic sterilization of the feeble-minded.

American Medical Association Library: Graphic demonstration by charts and posters of the various services rendered by the library to the individual physician. An exhibit of the *Quarterly Cumulative Index Medicus,* specimens illustrating the reference service, samples of package libraries and periodical lending service.

Council on Physical Therapy: Posters, apparatus and charts demonstrating ultra-violet light.

These are among the many interesting things to be shown in the scientific educational exhibit of the American Medical Association.

The Illinois State Department of Public Health will show many interesting things which the State Health Department is doing to protect the health of the citizens of Illinois. Several of these large exhibits have been built jointly by the State Department of Health, and the University of Illinois College of Medicine. The first of these exhibits was shown at the annual meeting in Joliet last year, showing the various manifestations of Pneumonia. This exhibit will be shown again this year, and in addition, similar exhibits will be shown on Typhoid Fever, Tuberculosis, Diphtheria, Pneumonia and Cancer.

In addition to these excellent exhibits, the Department will display and demonstrate the State Department's Laboratory Facilities.

These interesting exhibits have been procured for this meeting through the cooperation of the Section on Public Health and Hygiene of the Illinois State Medical Society.

The University of Illinois School of Medicine will join with the State Department of Health in showing these interesting exhibits mentioned above. Other interesting exhibits will be shown by our University Medical School, and will be in charge of Department heads, from that school.

The Illinois Society for Mental Hygiene will have an interesting exhibit which will be in charge of Helen L. Myrick. This will exhibit many interesting things in connection with the Mental Hygiene activities, and has been arranged in conjunction with the Section on Public Health and Hygiene.

The Chicago Health Department will display an interesting exhibit which will be in charge of the City's Health Commissioner, Dr. Arnold H. Kegel, of Chicago.

Loyola University School of Medicine is planning a highly interesting scientific exhibit, from the departments of that school.

The Illinois Tuberculosis Association has planned an interesting exhibit showing the work which has been done to check the ravages of the Great White Plague. The exhibit will be in charge of the executive Secre-

tary of that Association, Mr. W. P. Shahan, Springfield.

Dr. Vilray P. Blair, of St. Louis, has arranged an interesting exhibit showing the newer methods in plastic surgery. The exhibit consists of interesting charts and illustrations of these procedures, along with wax models to illustrate the interesting points in connection with the work.

Washington University School of Medicine, St. Louis, is planning to have several of their departments represented with interesting scientific exhibits. The details have not yet been announced, but they will be given in the official program.

There will be a considerable number of other interesting scientific exhibits shown, which will add greatly to the value of this type of visual education to the Medical Profession of Illinois.

More complete details will appear in the official program to be published in the April issue of the ILLINOIS MEDICAL JOURNAL.

BEWARE OF IMPOSTER

Beware of a man representing himself as Dr. Sylvan Coombs, establishing his identity through prescription pads stolen from my office, also a statement from Finch and Company for whiskey. He is about five feet ten or eleven inches, weighs about 175 pounds, has gold tooth on right side of upper jaw, very deep dimple in chin, ruddy complexion, blond hair, carries new doctor's grip, wore a blue suit and carries a racoon overcoat. He operates over a wide territory, last report of forged checks coming from Dr. Young of Aurora.

(Signed) DR. SYLVAN COOMBS.

EDUCATIONAL COMMITTEE PRESENTS FIGURES INDICATING SERVICE GIVEN TO PUBLIC AND MEDICAL SOCIETIES

January and February, 1931

67—Lay organizations, with a total attendance of about 6,000, secured speakers for health programs from the Educational Committee.

35—Appointments represented down state organizations.

32—Appointments were in Chicago or Cook County.

75—Radio Talks were given from stations WGN and WJJD.

25—Physicians were scheduled to present scientific programs before county medical societies.

1,375—Health educational articles, announcements of meetings of medical societies, programs of public health meetings, were released to newspapers of the state.

24—Packages of material on "State Medicine" were supplied to debating teams or individuals in 14 different communities of Illinois, Michigan, Ohio, and Indiana.

JEAN MCARTHUR,
Secretary.

ANNUAL MEETING OF AMERICAN COLLEGE OF PHYSICIANS

The fifteenth Annual Clinical Session of the American College of Physicians will be held at Baltimore, Maryland, March 23-27, 1931, with an additional day at Washington, D. C., March 28, 1931.

The Baltimore general headquarters will be at the Alcazar and the Washington headquarters will be the District of Columbia Medical Society Building.

The complete program can be obtained by writing E. R. Loveland, executive secretary, 133 S. 36th St., Philadelphia.

REPORT AND OUTLINE OF THE ACTIVITIES OF THE WOMAN'S AUXILIARY TO THE ILLINOIS STATE MEDICAL SOCIETY

The first meeting of the Board of the Woman's Auxiliary was held in Chicago on June 20, at which time the following Standing Committees were appointed:

Organization—Mrs. W. D. Chapman, Silvis, Ill.
Press Publicity—Mrs. Louis Ostrom, Rock Island, Ill.
Legislation—Mrs. D. J. Evans, Aurora, Ill.
Printing—Mrs. G. Henry Mundt, 700 South Shore Drive, Chicago, Ill.
Social—Mrs. R. R. Ferguson, Chicago, Ill.; Mrs. C. O. Boynton, Sparta, Ill.
Program—Mrs. Geo. W. Post, River Forest, Ill.
Revisions—Mrs. F. H. Pirnat, 2422 Smalley Court, Chicago, Ill.
Public Realtions—Mrs. A. H. Baugher, 5214 Greenwood Ave., Chicago, Ill.
Registration—Mrs. J. R. Harger, 544 N. Kenilworth Ave., Chicago, Ill.; Mrs. S. E. Allen, Arcola, Ill.
Credential—Mrs. Floyd Phillips, Arthur, Ill.

The Board felt that there were three objectives which should constitute, to a large degree, the work of the Auxiliary for 1930 and 1931.

1st. The organization of additional counties should be attempted, inasmuch as there were only twelve counties organized at the present

time. Accordingly, Mrs. Chapman was made Chairman of this Committee and each county now organized was urged to organize an additional county during the present administration.

2d. That the present members of the Auxiliary should, so far as possible, educate themselves regarding health problems and interest themselves in lay education along the same lines.

3d. That they should assist the Illinois Medical Society in the securing of such legislation as was felt advisable by the Legislative Committee of the Chicago Medical Society.

Additional Board meetings have been held in Chicago on September 26 and January 16 respectively.

The Press and Publicity Chairman has been urged to keep in contact with all the organized counties in the State and to furnish to the JOURNAL the activities of each Society.

Study envelopes have been mailed to the Presidents and Secretaries of all the organized societies.

An excerpt from an article appearing in the Delineator Magazine was mailed to all County Presidents requesting them to take up the subject of the article with their members and urge them to write to the Delineator protesting against such articles.

Listed below is a report of the activities of the various counties up to the present time of this year:

Cook County

Sept. 24, 1930. Reguar meeting of Woman's Auxiliary, at the Medical & Dental Arts Building.

Oct. 1, 1930. Luncheon and meeting. Meeting addressed by Dr. James H. Hutton, President of the Chicago Medical Society. Subject, "How the Auxiliary can be of Value to the Illinois State Medical Society."

Oct. 27, 1930. Regular meetings of Woman's Auxiliary. Address given by Dr. Arthur Joseph Cramp. Subject, "Patent Medicines and Public Health."

Dec. 3, 1930. Social meeting, luncheon and bridge. This meeting was held with a view to increasing the number of members of the Auxiliary. There were 84 present at this meeting.

Feb. 4, 1931. Regular meeting of the Woman's Auxiliary at the Medical & Dental Arts Building. Meeting addressed by Dr. Wm. D. Chapman, President, Illinois State Medical Society and Dr. John R. Neal, Chairman Legislative Committee, Illinois State Medical Society.

McLean County

November, 1930. Meeting addressed by the County Chairman of the Parent Teacher's Association, Mrs. Phillip Wood. The subject of her talk was, "Regarding the Activities and Problems of the Parent Teacher's Association."

December, 1930. Meeting was addressed by probation officer, Mrs. Frink.

January, 1931. Meeting was addressed by Mr. I. Albee, head of the American Legion.

February, 1931. Meeting was addressed by Mrs. Asher. Subject, "Problems of the Orphans at the Baby Fold."

March, 1931. Meeting will be addressed by Mrs. Strohmeier, head of the Social Service Department.

Will-Grundy County

October, 1930. Meeting addressed by Mrs. R. K. Packard, President of the State Auxiliary; subject, "Objective of the Auxiliary." The meeting was followed by a reception and tea.

January, 1931. Meeting was addressed by Dr. Lennon, of Joliet. Subject, "The Jones-Cooper Bill."

January 30, 1931. Dr. Blatt addressed the Woman's Club on Jones-Cooper Bill. This meeting was sponsored by Woman's Auxiliary.

The Southern Illinois Medical Association invited members of the Woman's Auxiliary to the Illinois State Medical Society to take part in the ladies' program at their meeting in Mascoutah, November 6 and 7.

Mrs. W. D. Chapman, Organization Chairman, gave an address. Mrs. T. O. Freeman, President-Elect and Mrs. C. O. Boynton, Councilor for the Tenth District, each gave talks on the work of the Woman's Auxiliary.

On November 20, Mrs. Boynton and Mrs. Freeman had the pleasure of attending a meeting of the Jackson County Medical Society in Murphysboro and gladly responded to a request from the secretary to explain to them the work of the Auxiliary and the need for one in each county.

On November 21, the wives of members of Franklin County Medical Society joined the doctors at dinner in Benton. After the dinner the ladies held a meeting, when Mrs. T. O. Freeman, at the request of the President of the Medical Society, addressed them on the need of organizing an Auxiliary.

Tri-County Meeting (Knox, Warren and Henry Counties) at Galesburg, October 13, Mrs. W. D. Chapman gave the address.

Sangamon County

March, 1930. Talk on Health Problems by Dr. Grace Wightman.

April, 1930. Talk by Dr. Geo. Palmer.

May, 1930. Auxiliaries—Mrs. Solomon Jones, Pres. Vermillion County.

June, 1930. Report of State Meeting by Mrs. Met-

calf. Speakers: Dr. Andy Hall, Dr. J. R. Neal, Dr. S. E. Munson. Medical Society was invited.

October, 1930. Auxiliary work, by Dr. S. Munson, Medical Society councilor—District 5.

November, 1930. Business meeting.

January, 1931. Talk by Dr. Ivy of Northwestern University.

February, 1931. Talk by Dr. J. R. Neal.

De Kalb County

Not functioning.

Kane County

1st Meeting. Joint meeting with doctors at Springbrook Sanitarium, Aurora, Ill.

2nd Meeting. Held at Hotel Leland, Aurora. Enjoyed moving pictures of a trip abroad by one of the doctors and wife.

3rd Meeting. Held at Elgin State Hospital. Entertained by Mrs. Davis.

4th Meeting. Plan to have County and Public School Nurses talk to us.

5th Meeting. Lecture and music.

6th Meeting. Summer meetings, picnics for doctors and wives.

Vermilion County

September, 1930. Report of National Auxiliary at Detroit, Michigan, by Mrs. Dale and Mrs. Solomon Jones.

October, 1930. Guests of Lake View Hospital in a joint dinner with our husbands and auxiliary of the hospital, followed by a talk by Miss Daily, State Supervisor of Nurses from Illinois State Department of Health.

November 17, 1931. Meeting held at the Young Women's Christian Association. Health Destitute program. Speakers: Miss Slimpert, Mrs. Bertha Gibson, Dr. M. R. Combs, Miss Fannie Brooks, Mrs. E. L. Allen, Mrs. T. O. Freeman, Dr. Aaron Arken—Chicago University, Mr. Luther Fuller.

Rock Island County

January, 1931. Addressed by Dr. Hess, University of Illinois.

The program and arrangements for State Meeting at East St. Louis May 5, 6, and 7 will be published in April issue. It is important that every member attend this meeting. Our organization is new and there are many problems confronting us. Our success depends on the activity and cooperation of each member.

MRS. R. K. PACKARD,
President.

THE OFFICE OF THE EDUCATIONAL COMMITTEE, 185 NORTH WABASH AVENUE, CHICAGO, WILL FURNISH MATERIAL ON THE FOLLOWING SUGGESTED STUDY TOPICS TO YOUR WOMAN'S AUXILIARY.

State Medicine

Dangers of.
Reports from other countries.
Legislation leading to.

Medical Ethics

The physician.
The physician's wife.

Periodic Health Examination

Every member of the Auxiliary has physical examination.
Importance in early discovery of cancer, heart disease, etc.

Smallpox and Vaccination

Ranking of Illinois.
Dr. Andy Hall's plan.

Pre-School Child Examination

Work of the Parent Teacher Association.
Examinations given by family physician.
Follow up for correction of remediable defects.

Cost of Medical Care

Physician.
Hospital.
Nurse.
Laboratory.
Pharmacy.

Medical Legislation

Cooper-Robsion Bill (Jones Cooper, Sheppard Towner).
Vivisection.
New bills which may be introduced (National, State).

Diphtheria

What is record in Illinois.
County record.
How many children immunized.
Death rate.

Public Health

State, County and City Departments, organization of.
Relation of the County Medical Society and its members.

Medical Organization

American Medical Association.
State.
County.

BILLS OF INTEREST TO THE MEDICAL PROFESSION BEFORE THE STATE LEGISLATURE

The following bills are of more or less interest to the medical profession:

Senate Bill 68, introduced by Senator Bohrer, provides that registered nurses must have an additional examination in order to be certified as public health nurses. This bill failed to get the endorsement of the Legislative Commitee of the Chicago Medical Society, and has not as yet been presented to the Council of the Illinois State Medical Society.

Senate Bill 92, introduced by Senator Thompson, an old age pension bill, provides $360.00 per year after age seventy to dependent persons.

Senate Bill 121, introduced by Senator Barr, an eight hour employment bill for women. This bill exempts nurses, but does not exempt hospital employees.

Senate Bill 142, introduced by Senator Finn, a physician senator, provides penalties to be inflicted for the sale of products containing wood alcohol, or methol alcohol, in any food or drink prescribing certain penalties.

House Bill 21, introduced by Representative McCluggage, provides a tax from one to one and one-half mills for municipal tuberculosis sanatarium.

House Bill 67, introduced by Representative Thon, is an amendment to the present Ophthalmia Neonatorum Act, making it a penalty for not using a prophylactic in the eyes of the new-born, instead of a penalty for failure to report such cases. This is a very laudable measure, and was recommended by the Judiciary Committee of the House to pass by a vote of forty-

seven (47) to nothing. The only objectors to the Bill are the Christian Scientists, who are mistaking the measure with State Medicine in that the Department of Public Health furnishes the silver nitrate ampoules gratis. It is assumed that an amendment to the measure, exempting on religious grounds, will placate the religious fanatics. There is a danger of over-lobbying in support of this measure.

House Bill 147, introduced by Representative Davidson, proposes to permit an ill or physically disabled person to vote.

House Bill 182, introduced by Representative Davis, a six day per week working bill. Nurses and hospital attendants are not included, although not specifically exempted.

House Bill 192, introduced by Representative Kuechler, a physician member, amends an Act in regard to administration of estates, changes expenses of last illness, including physician's bill, from third to first class claim.

House Bill 302, introduced by Representative Soderstrom, another old age pension fund bill.

House Bill 310, introduced by Representative Thompson, amends the Registration of Births and Deaths Act by providing that in case of death without medical attention that, instead of the registrar, the coroner shall be called, and he shall proceed as set forth in the Coroner's Act.

House Bill 311, introduced by Representative Thompson, another amendment to the Coroner's Act, in which in all cases where death occurs without medical attendance the coroner shall be called, and it is his duty to issue a certificate, and if death is not from natural causes, to hold an inquest.

Quite a number of minor measures have been introduced regarding relief for the blind, sanitary regulations, etc. The Legislative Committee is prepared to furnish a copy of any bill upon request.

J. R. Neal, M. D.,
Chairman, Legislative Committee.

CONVALESCENT HUMAN SERUM CENTER AT MICHAEL REESE HOSPITAL

The establishment of a serum center at Michael Reese Hospital, Chicago, to supply special human sera to the Chicago district for the treatment of various infectious or contagious diseases, especially for the treatment of infantile paralysis, has been announced by the hospital.

This is the first serum center to be established in the state of Illinois, although the importance of these laboratories have proved their value in such cities as Boston, San Francisco, and Detroit.

The creation of the serum center comes at a time in which there has been a marked increase in the number of cases of infantile paralysis in Illinois. The number in 1930 was almost five times that for 1929, the comparative figures being 410 in 1930 against eighty-eight in 1929.

The sera that will be supplied are different from horse sera previously used, such as diphtheria antitoxin, tetanus antitoxin, etc. These commercial sera can be produced in any quantity needed but those now being prepared in the serum center are being obtained only from patients who have recovered from various diseases, and whose serum has been shown to prevent disease in patients who have been exposed to similar infection. In some instances, these human sera have definite and marked curative value, as in the case of infantile paralysis and scarlet fever.

It has been found that serum from people who have passed through an attack of infantile paralysis, when given to patients with the acute disease, before paralysis has appeared, will prevent paralysis in a very high percentage of cases, and will prevent death in an even higher percentage.

The Visiting Nurses' Association, of Chicago, is co-operating in this work and already has secured the promise of many individuals who have recovered from infantile paralysis to donate some of their blood. It is hoped that many people will volunteer to donate blood because the Center wants to furnish serum for all who need it, regardless of whether they can pay for it or not.

The Illinois State Board of Health will distribute convalescent serum, and close co-operation between it and the Michael Reese Hospital Serum Center has been arranged for.

DEVELOPMENT IN THE PROBLEM OF ARTHRITIS

In his review of this subject, Ralph Pemberton, Philadelphia (Journal A. M. A., Jan. 3, 1931), stresses the fact that attacking this problem with any drug or any vaccine alone is too often like firing at the head above the ramparts instead of at the fortification itself. In the opinion of most of the American committee for the control of this disease it is of the first importance to envisage the disease as a whole instead of focusing on any factor, be it mechanical, bacteriologic or nutritional, which may merely precipitate it. In arthritis a variety of factors contributes to bring about the disease. No agency or organism is recognized by the American Committee for the Control of Rheumatism as the single cause of it, and no drug, vaccine or any single form of therapy can alter the hereditary or constitutional make-up, the faulty anatomy or physiology of the intestinal tract or the deranged metabolism secondary to the disease, perhaps sometimes underlying it. There is probably no other consideration before the medical profession more important in terms of persons now living than that of seeing this problem whole. Even irregular practitioners are now beginning to treat these sufferers with a breadth of view which some of the leaders of medicine do not entertain. The medical profession as a whole is not much more immune from prejudice of single-minded enthusiasm than are those who constitute it. Is it to allow to be repeated here the experience in the field of physical therapy in which the layman and the quack, almost alone, kept alive therapeutic principles rediscovered fifty years later by orthodox medicine? The problem of arthritis is unrolling and developing before the eyes of the medical profession. Should not

physicians highly resolve to catch up with and keep abreast of this evolution and extend its fine possibilities to the hosts of arthritic patients in this country? It is of importance to learn more concerning this protean disease, but it is even more important for the generations now living that the profession learn more of what is already known about it. Orthopedic surgeons have gone afield in the past to atone for much neglect and mismanagement on the part of others. Their help may be equally necessary in the better mapped and brighter future.

THE THREE HORMONE TESTS FOR EARLY PREGNANCY

A clinical evaluation of various tests as represented by Charles Mazer and Jacob Hoffman, Philadelphia (Journal A. M. A., Jan. 3, 1931), is as follows: The ovarian hormones; the sex-maturation hormone of the anterior pituitary gland; Aschheim-Zondek test; the female sex hormone test, and the Siddall test. The authors conclude that the hormon tests for pregnancy are of distinct clinical value in the differential diagnosis between early pregnancy, normal or ectopic, and pathologic conditions associated with amenorrhea or irregular uterine bleeding. The female sex hormone test is the more reliable when positive in that the proportion of error in nonpregnant women is less than 4 per cent. A rigid interpretation of the vaginal spreads and the elimination of abrupt and delayed reactions reduce this element of error considerably. The inability of the genital tract to utilize the small quantity of female sex hormone present in the circulating blood in women with ovarian deficiency results in its elimination by the kidneys; hence the occasional false positive reaction by the female sex hormone test in these cases. The compensatory pituitary hyperfunction accompanying ovarian deficiency is responsible for the comparatively large number of false positive reactions in the Aschheim-Zondek and Siddall tests. The tests performed individually render a positive reaction in about 75 per cent of early pregnancies; when combined, the percentage of positive reactions is increased to 90, by virtue of one of the three tests showing a positive reaction. A negative finding does not exclude the possibility of pregnancy; repeated negative reactions are fairly reliable.

ADENOCARCINOMA OF THE HEAD OF THE PANCREAS

Elmer Hess, Erie, Pa. (Journal A. M. A., Jan. 3, 1931), reports the case of a women who notice a tumor mass in the right side of the abdomen, which was freely moveable. A competent man, head of a prominent diagnostic clinic, reported after a complete gastrointestinal study that the tumor, which apparently was fixed to the lower pole of a freely movable right kidney, was probably a hypernephroma. Several cystoscopic studies were made with the final preoperative diagnosis, calcified cyst of the lower pole of the right ectopic kidney. At operation the kidney was found to be perfectly normal, although freely moveable. The tumor mass, which was below the pelvic brim, was easily delivered into the loin incision and easily removed. Death occurred forty-eight hours later. Observations at autopsy revealed that an adenocarcinoma, involving the head of the pancreas, had been removed.

PRINCIPLES OF PROGNOSIS IN CANCER

William Carpenter MacCarty, Rochester, Minn. (Journal A. M. A., Jan. 3, 1931) states that there are at least fifteen factors governing prognosis in cancer: (1) The presence or absence of glandular involvement and distant metastasis. (2) Fixation of growth. (3) Location. (4 and 5) Renal and cardiac efficiency. (6) Anemia. (7) Size of growth. (8) Age. (9) Direction of growth. (10) Loss of weight. (11, 12, 13 and 14) Cellular differentiation, lymphocytic infiltration, fibrosis and hyalinization. (15) Duration of disease. Signs and symptoms in cancer have to do with size, anatomic location, mechanical obstruction and hemorrhage. Even pain is usually insignificant unless associated with mechanical obstruction. None of these are diagnostic of cancer or even prognostic if therapy can be instituted. Many benign conditions present such signs and symptoms and may have been present long before cancer has arisen. Any system of microscopic grading of cancer should not alone be of accurate clinical value without taking many other factors into consideration. Furthermore, any system which merely states that a certain percentage of patients with certain grades live a certain length of time does not necessarily furnish data for any specific case. In other words, there is no criterion by which one can state that a given case belongs in the favorable or unfavorable percentage. Moreover, the wise and successful practitioner of the art of medicine will certainly take all possible factors into consideration in making a clinical prognosis. These practical clinical generalizations should not inhibit or prohibit pure scientific studies of possible factors which may or may not be indexes of behavior rather than prognosis in cancer. Perhaps these indexes might be of clinical value in the future, but at present all grading of cancers should be considered in the investigative or experimental stage.

CLINICAL DETERMINATION OF THE ALBUMIN GLOBULIN RATIO IN SPINAL FLUID

A method is described by William G. Exton and Anton R. Rose, New York (Journal A. M. A., Jan. 3, 1931), which separates the two main protein fractions and is a modification of similar methods developed for blood and urine. In principle, the method separates globulin from albumin in the classic way by half saturation with ammonium sulphate and then determines the concentration of each fraction by scopometry after precipitating the albumin and globulin separately with phenol. Because the sum of the amounts of albumin and globulin obtained in this way correspond with the total protein results obtained with the protein reagent and scopometry, which gives excellent correspondence with Kjeldahl checks, it is easier to obtain the concentration of the albumin fraction by subtracting the globulin from the total protein than by precipitating the albumin separately.

Original Articles

DIPHTHERIA AND SCARLET FEVER*

ARLINGTON AILES, M. D.
LA SALLE, ILL.

My only excuse for writing this paper and reading it before this section is that I was invited to do so and did not refuse. I have no proven scientific facts to add to what is already known, but if the paper will excite any thought or cause some discussion of the subject we all may benefit.

Last year I read a paper before this section on "Control of Diphtheria," which was published in the ILLINOIS MEDICAL JOURNAL for November, 1929, page 337. This paper is a reiteration and amplification of some of the ideas expressed at that time. At that time I stated that the district, over which I have health supervision and comprising 30,000 population, had not had a case of diphtheria for 2½ years nor a death for 3½ years. Now I can add another full year to each of these figures. In this community comprising La Salle, Peru and Oglesby there has not been a known case of diphtheria for more than 3½ years nor a death from this disease for nearly five years. At that time the discussant, quite naturally, raised the question of the probability of missed cases. This probability will be fully covered in this short paper.

Now firstly, I wonder if this is an unusual record; or perchance, can many cities of 30,000 population claim the same distinction; and secondly, if they can to what do they attribute the fact. We read of quite a few cities that have low case and death rates, but these attribute the fact to the extensive use of toxin-antitoxin. However, in the community spoken of above practically no toxin-antitoxin has been given, either by the health department or the physicians. If this is then an unusual record, to what is it due? Disregarding immunization, is diphtheria susceptible to influences that do not affect scarlet fever.

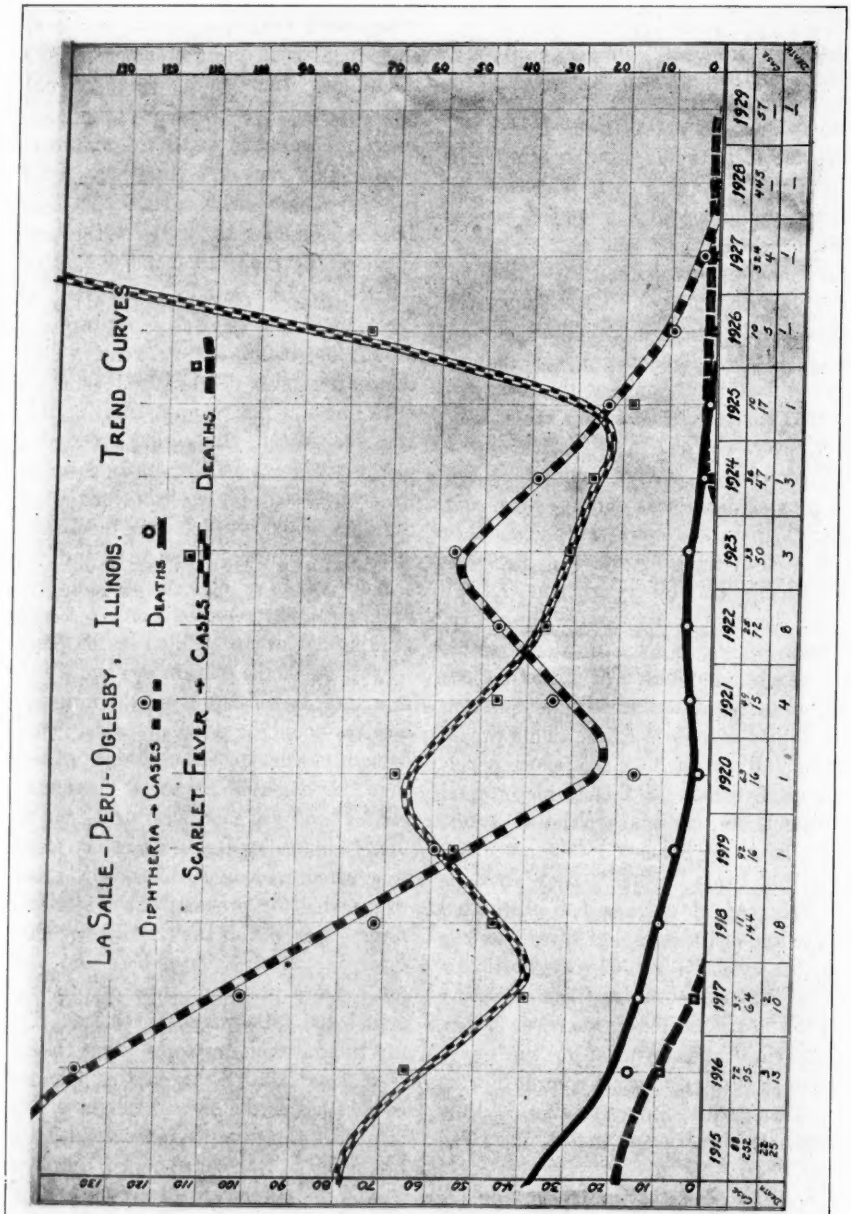
Here I wish to exhibit a graph showing the cases and deaths for both diseases for La Salle, Peru and Oglesby, and covering the period from 1915 to 1929 inclusive. You will note that in 1915 diphtheria was much the more prominent disease with 252 cases and 25 deaths, while scarlet fever showed 88 cases and 22 deaths. Then there was a general decline in the case rate of both diseases until early in 1927 when diphtheria disappeared from the picture and scarlet fever reasserted itself more strongly than ever. In the fall of 1927 an epidemic of mild scarlet fever carried over through 1928 and was not entirely eliminated until the summer of 1929. During this time 826 cases occurred with only two immediate deaths attributed to this cause. This is a case fatality rate for the latter period, as shown by the graph, of 0.47% against 25% for the earlier period. The graph shows the death trend also generally downward. That for diphtheria should disappear early in 1925, while the scarlet fever deaths disappeared as early as 1917 and did not reappear until 1924, when we had one death. Since that time we have had one in 1926, one in 1927 and one in 1929. The lines on the graph are smoothed by three year averages, which accounts for them not following closely the figures for the years indicated.

Now we have every reason to believe that diphtheria was reported much better at the beginning of this period than scarlet fever, because, by the use of the culture, we had a very definite means of diagnosis. Even the mildest cases and carriers could be so diagnosed. This was not true of scarlet fever, and then also the belief that scarlatina and scarlet rash was not true scarlet fever was more prevalent than now. This fact combined with the so-called strict quarantine, which increased resistance to reporting, was responsible for probably the majority of scarlet fever cases not being reported. Then scarlet fever, in 1915, may have been and probably was much more prevalent than diphtheria, and the actual case fatality rate much less. Even granting this it seems impossible that the true scarlet fever case fatality rate at that time could have been as low as the present rate of 0.47%. Therefore scarlet fever, as is contended, must have lost much of its virulency in recent years.

Now the discussant of my paper last year implied that we must be missing cases of diphtheria. Answering this, I wish to call attention to the graph again and ask, that if we have the health machinery to find 826 cases of mild scarlet fever in approximately two years, why do we not also find diphtheria cases if there are any. Find-

*Read before Illinois State Medical Meeting, Section on Public Health and Hygiene, May 22, 1930.

ing the doubtful cases of diphtheria should at least be easier than finding scarlet fever, because of the definite advantage of the culture method. but within the time stated have not made a clinical diagnosis of the disease. During 1915 as many as 1,660 throat cultures were examined



We still have the laboratory and we still examine many throat cultures, but for many months have not found one positive. Occasionally, however, our physicians have given antitoxin for safety, for diphtheria, of which 336 were positive. The total number examined that year for release and quarantine was 3,270. By 1925 there were only 316 for diagnosis, of which 15 were positive;

and since January, 1926, there have been no positives.

Coincident with this reduction there was a gradual increase in the efficiency of the school and communicable disease nursing, but none whatever in the efficiency of quarantine. During 1925, however, the efficiency of the nursing service was probably quadrupled, by raising the number of nurses from 4 to 7, employing them 12 months of the year instead of ten, and providing each with a car. Besides all this, one of these nurses was a trained supervisor with large experience and capable of getting the most out of this kind of work. Then in 1926 a liberal modified quarantine was adopted, which takes away most of the resistance to quarantine and greatly aids in getting the case on record. It not only takes away the resistance on the part of the family, but by so doing the doctor is glad to report, not only his severe cases, but his mild and doubtful cases as well. The nurse also is more freely admitted to the home and finds many cases; the parents report many cases themselves, and the health officer finds many secondary cases. As evidence of this fact let me state that, for the school year ending in June, 1928, there were in La Salle and Peru 678 known cases of scarlet fever. Of these the physicians reported 303, or approximately 45%; the nurses found 151, or 22%; the parents reported 28, or 4%; the neighbors 6, or 1%; and 190, or 28%, were secondary cases found by the health officer on his revisits to the home. Thus the doctors reported nearly one-half of these mild cases, which is really complimentary, because for most of the cases a doctor never would have been called. I might add that there were 1,981 exposures in the quarantined homes with 18% of secondary cases developing from them for the period of the above school year. This does not indicate a specially good isolation with the homes. However, the same figures for 1929 shows an improvement with only 6% of secondary cases developing within the homes. For comparison it might be interesting to state that the secondary cases for measles, whooping cough, and chickenpox were 75%, 74% and 64% respectively. Therefore scarlet fever is not nearly so contagious as these latter diseases. For obvious reasons I do not have comparable local figures for diphtheria.

Briefly, the method of finding cases includes two essentials: firstly, the doctor's reports; and secondly, the health department activities. The nurses visit the schools daily, and through the cooperation of the teachers the absentees are listed, and any suspiciously sick children examined and excluded. These are followed into the homes and any suspicious cases reported to the health officer. The health officer then goes to these homes and places the necessary quarantine, or orders other restrictiive measures as may be indicated. Many times no diagnosis can be made and the order takes the form of a mere request to keep the child out of school for a certain number of days, or until a subsequent visit by the nurse or health officer determines the child to be well. We quarantine and release many cases without the doctor ever being called, and on the other hand, many physicians are called to cases as a result of our advice to parents that it be done. Altogether I believe that our physicians receive more calls as a result of our policy, and very little conflict between them and the health department ever occurs.

Now I believe that you will agree with me that if we had diphtheria we would find it, and this brings us back to the original questions. Is it unusual for an urban community of 30,000 to be completely free of diphtheria for 3½ years and have no deaths for 5 years? If it is unusual, can it be attributed in whole or in part to the activities or procedures outlined above, or is it due to chance? May not diphtheria be susceptible to these influences, while scarlet fever can not be so influenced. Would you advise me to institute a vigorous toxin-antitoxin campaign or would you suggest that the experiment be continued? I would appreciate discussion, suggestions and criticisms.

DISCUSSION

Dr. Charles H. Miller, Chicago: It is well known that Dr. Ailes is making a record, and he certainly brings up some points that make one think. In Chicago we are trying to depend upon toxin-antitoxin to eradicate diphtheria. Dr. Ailes apparently is perfectly successful without using it. The discussion will be opened by Dr. Orvis.

Dr. Howard A. Orvis, Winnetka: The paper, I think, is a fine demonstration of the efficiency of health department control. It seems to me when the department became active here from 1915 down through this period to 1926 or 1927, that it was working against numerous foci of infection, carriers, missed cases and unreported cases. The effective work of the nursing group and

all the factors of the health department gradually became effective as time went by until in 1926 or 1927 they managed to isolate the last focus. At that time the last carrier throat, the last unreported case, was isolated and cleaned up. Now, as there have been no foci nor reported cases, I don't believe there have been any missed cases. I don't believe you get missed cases without secondaries showing up. Dr. Ailes has been fortunate in not having any reintroductions. Keeping his area clean from diphtheria is a tribute to the department, as the fuel for the fire is there. If you were in an area where there were introductions from the outside, you would have new foci constantly to clean up.

Another point would be interesting to know. Supposing that he had begun at LaSalle and put in this intensive work there and had not employed the same intensity of work in Peru, would he have gotten a clean slate? Would the one area remain with its foci and the other be clean, despite constant reintroduction of the infection?

I have had a somewhat similar experience for the last three and a half years with only 15,000 population. I have had five cases. Three of these were from known sources outside of our area; two of them were from unknown sources. There were no secondaries from these cases. We have a moderate amount of immunization done by private physicians.

I think that with the activities such as Dr. Ailes follows out, checking every case for its contacts, not releasing a case until the throat is clear and checking all exposed throats so that there are no missed cases, that it is possible for a small community to remain fairly free of diphtheria unless there is constant reinfection from the outside. Now, whether that can be maintained, I believe, is due entirely to the type of population. If you are in an industrial area, where you are bringing in constantly a great number of new people, you will reintroduce your infection from the outside. Yet with intense activities in the health department and intense nursing service, I think we can keep this down to a minimum.

The same isn't true as to scarlet fever. The strep-throats are so common as to hardly be considered pathogenic. I don't know of any community that is entirely free from scarlet fever for a long period of time. It does occur in the case of diphtheria. There is a constant source of strep. infection that we don't get under control.

In our last three years, 74 per cent. of our cases were of unknown origin; 26 per cent. were of known contact and nearly all of those occurred in the home of primary cases. In other words, they were those that are subject to mass infection or repeated infection by the active cases.

Dr. Ailes brought up the idea of the decrease in the virulence of the disease. I think we are all experiencing that. We are having much less of the virulent type than we used to have a few years ago. I have had only one virulent case and one death in three years. The cases that bother us just at the present time are so exceedingly mild as to cause us great difficulty in diagnosis. A child will be out of school for a few days with a sort throat. We check up on him when he comes back and find him peeling a little. We have difficulty in convincing the mother or the physician that he has scarlet fever. Since March and April we have been having a relatively high incidence of scarlet fever. I put a nurse in the school each morning to check over the throats of the groups they had been in contact with. We got two or three cases that came out of these group of known contacts, whereas we have had several times that many other cases where we didn't know of any contact. In other words, among the known contacts only a relatively few cases develop, yet the disease is kept active from some other source of which we don't know.

I some time ago took some throat cultures among families of cases of scarlet fever and also of those that were attending these patients. I have done this both at the onset and release of the cases. I carried that out for two or three months while we were having a mild flare of scarlet. I found this to be the case: that a large percentage of active cases at the end of the quarantine period, even though all clinical symptoms had subsided, carried hemolytic strep. in their throats. The State law won't allow us to keep these out of school on that particular basis. I have had one child in school that had a positive throat for 60 days after he went back. The cultures were taken twice a week. We found there was no secondary case in that school among those who came in contact with this boy.

The throat cultures of the mother or the attending nurse and brothers and sisters, where contact is intimate, not infrequently show the hemolytic strep. Therefore, we have a lot of throats that are carrying hemolytic strep. when we have scarlet fever. We suppose they are the same type as scarlet fever.

We have then other sources of possible contagion aside from the clinical case.

An editorial in the Journal A. M. A. of May 17, 1930, says in some series 41 per cent. of the Dick negative cases are without a history of scarlet fever; that is, in the Dick test of the group, 41 per cent. of the negatives haven't had any clinical history of scarlet fever. How did they get their immunity? We naturally think they must have come in contact with the organism some time during their career in order to develop that immunity. Are they getting their immunity by minor infections of the throat which don't develop into active cases of recognized scarlet?

We have had quite a number of children that have been immunized by the Dick method who are showing well developed pictures of clinical scarlet. I can't give statistics on that because I haven't sufficient numbers to warrant it, but in the last two years we have had six or eight cases to my knowledge that have been immunized by the Dicks or by pediatricians within five years.

Work on the strep. group has been very intensive. Those of us who are not experts in laboratory technique and all of the details of the work that is being done know they follow certain trends that seem to be

very positive; and yet we haven't a clean-cut test to differentiate the different types of strep. as a good clinical working basis.

It seems to me very evident then that, in the case of scarlet fever as contrasted to that of diphtheria, we are isolating only a portion of the sources of infection. We isolate certain active cases that come out as definite clinical scarlet fever. Yet in that same group there are a good many throats that probably can transmit the disease. These are carriers, maybe only for a short period, which are transmitting our disease and yet are not recognized. As long as that condition exists, and we are not able to isolate or even recognize all of our throats that may be carrying hemolytic strep., we are going to have scarlet fever with us. We can not get a real, definite control of scarlet, anything comparable to what has been done there in diphtheria, until some of those active and definite tests are worked out.

Dr. Charles H. Miller, Chicago: The chair, in common with Dr. Ailes, would be greatly pleased if we could have in this discussion a reflection of your opinion as to the wisdom of continuing Dr. Ailes' method of handling diphtheria as a collective experiment, as a collective investigation. Information would be greatly valued, I am sure, by the health officials on whether it is better to use the toxin-antitoxin. Then I would like to know what your ideas are relative to the wisdom of the modified quarantine, which he strongly sanctions.

Dr. G. W. Haan, Aurora: I didn't hear all of Dr. Ailes' paper, but I came in in time to hear that he had no diphtheria discoverable since 1927. I don't believe that is altogether chance. Of course, we all know those of us who have made any observations at all, that all of these contagious diseases go more or less by waves. A few years ago we didn't have a death in two years in about 55,000 inhabitants and very few cases of diphtheria. But I like this record of no cases for three years. That is quite remarkable, when the statistics show that in the ordinary persons on the street about two per cent., perfectly well, are carriers, that the natural habitat of the germ of diphtheria is in the throat of the human being. The doctor evidently has so tamed those germs down in LaSalle and Peru that they won't leave the habitat and come out, or if they do all their power to infect is gone. I don't think it is all chance. I can't believe, knowing somewhat the biology of that germ, whose natural habitat is the throat of the human being, that he is going to always remain clear. I don't know just what kind of a community that is down there that there is no introduction whatever of those germs, that they don't cough them out in some way. Anyhow, that's the most remarkable thing that I have seen yet. Such a large community where there is, I take it, a proper laboratory to test these things. I didn't hear the whole paper, but heard something about the kind of work they are doing.

But as to certain conclusions that the doctor drew about diphtheria, whether immunization should take place in the pre-school age or about as they enter school, I have this to say: that the majority of diphtheria cases are buried before they enter school, about 62 per cent. So those he won't immunize any more. The Lord has immunized those and buried them. Therefore I regard that as a mistake. Of course, it doesn't make much difference down in LaSalle whether they immunize or not if they have no diphtheria there. In Aurora our luck deserted us and we have stopped counting the deaths this year. I really don't know how many deaths we had. The first death we had up there was an adult about 50 years of age. It knocked us off of our peg. We thought and thought strongly of immunization; of course, we have always taken the stand up there that immunization is a good thing with the toxin-antitoxin. So good indeed that from April 1, 1929, to October or November 1, 59 per cent. of the infants that have become six months of age were immunized. There was such a scare driven into us that we began to work with a systematic attempt made in Aurora that when an infant reaches six months of age a letter is sent to the mother of that child from the health department stating that "your daughter Mary now is six months of age and it is up to you to take her down to your family doctor and if possible have that child immunized if the child's health permits, that it is a harmless procedure." And that process has worked somewhat better than I thought it would. The health nurses are given about 25 or 30 a week of these notices and they follow them up and never let up on the people until they have got these babies in and have them immunized.

As I said before, I think the government report shows that 62 per cent. of deaths from diphtheria occur before the child is five years of age. I think I am correct. And probably a good deal more, because there are children buried in the rural districts who died from diphtheria where no diagnosis ever was made. In fact, that has occurred to me in Aurora.

One morning early I was called up by a mother who said, "Doctor, my child died with the mumps. How can I get a burial certificate? I have no doctor." Think of it! Mumps. When I got there, there were four others nearly dying from diphtheria. So, the chances are that the one child that died didn't die of the mumps at all. How often does that happen elsewhere? Of course that couldn't happen in LaSalle. Of course not, because there is no diphtheria there. But there has been some in Aurora.

Now in regard to scarlet fever quarantine. If we are going to quarantine at all, and I quite agree with the doctor that quarantine hasn't got a lot to do with any contagious disease, but it has something to do with it, because Dr. Rawlings one time objected to discontinuing quarantine, even in chickenpox. I believe maybe he was right, because some children are pretty sick even with chickenpox, even if they don't die. In any event, if we quarantine at all, why not quarantine the adults that haven't had scarlet fever? Now, scarlet fever distinctly is not a chillдren's disease absolutely. A good 20 per cent. of scarlet fever is adult. Now, why quarantine the 80 per cent. and let the 20 per cent. run at large? Because these people are going

to come down sooner or later. I made that statement up at Elgin one time. They thought I was a little hypercritical in quarantining adults, that I had no authority from the State Board of Health to do that, but I took the authority, and the State hasn't kicked about it yet.

Now, in Aurora, unless they have previously had scarlet fever, they can either take an immunizing dose which Dr. Parks of New York approves or they can go into neutral quarantine for a week to see what is going to happen. The cold statistics show that over 20 per cent. of the scarlet fever cases in Aurora were adults; that is, adults over sixteen years of age. And I found when I was attacked up at Elgin on that proposition and when Dr. Hoyne, who happened to be there, said it was between 18 and 19 per cent., they let me off. Well, I had my own statistics from Aurora for ten years, and it couldn't be altogether an accident any more than it was altogether an accident that the doctor didn't have any diphtheria in three years. That was good work of some kind and a lot of luck with it. Because in a community of 30,000 you have no right to draw conclusions from statistics until you take a period of at least ten years, giving you in ten years a population of 300,000 approximately, and that is too small a number to take statistics for definite conclusions.

One more thought and I am through. For nine years I took the deaths from diphtheria in Aurora and added their ages and divided by the number of deaths, and the quotient was a little more than six, and that made me look up the federal statistics. I found that over half of all diphtheria deaths occurred before they ever enter school.

Dr. A. A. Crooks, Peoria: It hardly ever happens, my good friends, that Dr. Ailes and myself don't come to grips on some statement that either he or I might make before one of these sessions, and it has always been in the best of spirit. Now Dr. Ailes has given us a lot of things to think about this morning, things that have been to the foreground in the State of Illinois for quite some years. Not one of us excepting friend Ailes has had the temerity to question the written rules and regulations to the same extent that he has. However, he is not alone in questioning some of our strict quarantine procedures, and there are only a few of us, I feel, remaining who are on the firing line daily who hold strictly with what is now our rules and regulations governing communicable diseases in the State of Illinois.

There is a background here which didn't commence in Illinois, but more particularly in the East. I have a very vivid recollection of attending, by invitation, a round-table discussion in Buffalo, I think, at the session of the A. P. H. A. when this very question was discussed by those invited, and there seemed to me at that time an unanimity of opinion and concerted action, particularly on the part of those members present from the eastern states and the states immediately west of the Alleghanies, to abolish many restraining regulations, particularly pertaining to chickenpox, mumps, whooping cough and scarlet fever. I could not help getting the impression that they were willing to destroy many of the restraints that are presumed to come from a rigorous quarantine.

The matter of scarlet fever engaged most of our attention, and in those days I thought that I knew something about scarlet fever, since which time I am doubtful if I do know much about it, because my opinions have had to be revised repeatedly.

I serve a daily school population of 16,500. I have seen cases in the late prodromal stages, even eruptive, in the school room. Their presence had not elicited the attention of the teacher, and I have, on several occasions, had pupils vomit in the class room or corridors and, without any exception, there has not come a secondary case from such contact. It goes without saying that strict methods were applied, that all of our well-known methods of control were immediately applied, but not one secondary case has come.

It is a practice with me not to close a school or schoolroom, but where we have a bad contact to inspect daily every child of such known contact. This is not done by the nurse. This is done by myself. The school nurse makes a home contact of all absentees during the incubation period of all exposures in such a room.

Like Dr. Haan, I have had missed cases return to the school room that had escaped every one of us in charge. To my knowledge, I have not had a secondary case arising from such an exposure, if it is an exposure. I can only come to the conclusion—and I may have to revise this in another year, because I have had to revise many of my opinions on scarlet—that we are getting our cases primarily, I feel, in the main from the carrier.

It was heartening to me that Dr. Orvis of Winnetka was able to do as much as he has in his laboratory in isolating the streptococcus hemolyticus. I have not had that good fortune. The laboratory that serves us has not been able to definitely differentiate the streptococcus hemolyticus from the other streptococcic groups in the numerous nasal and pharyngeal cultures submitted. There is so much commotion and such an insistent demand that we release some of our rigorous quarantine procedure, particularly the length of time that we should quarantine our scarlet fever cases, I have been particularly anxious that the laboratory findings would, as in diphtheria, be the means of raising our quarantine. It is the logical method, it would seem to me. I would be glad if Dr. Orvis would further enlighten this group as to his method of technic, because friend Orvis happens to be the only man of my acquaintance who seems to have had such a lucky experience.

I do want to register this, and this is in contradiction to what Dr. Ailes has suggested, that, until such time has arrived when we know more about scarlet fever, I will have to string along with Parks of New York that we maintain our present quarantine, rigorous though it is, of the case and contacts until such time as we know that we are not releasing on the public

a person who is a potential carrier or possibly still an active case.

This was very enlightening (referring to chart). We have had in Peoria, or did have, a similar experience. The history is this, that up to seven years ago Peoria was ravaged annually with diphtheria; some years virulent, other years not. About this time I went into the school system and I was looking for diphtheria and particularly was I looking for the focal point. I didn't have long to wait. One of our school principals called me and said, "I have a number of sore throats in a particular room. Would you come down;" I responded as rapidly as possible, stopping at the city health department in the city hall to get an armload of culture tubes, and we received as a recompense for our trouble eight positive cultures. They were taken care of, of course, in the usual way.

The next year we had two cases of diphtheria in a population of approximately 100,000 population. Then the succeeding year two cases; the succeeding year three cases; the next year, seven, and the next year, nine, and then this year the calves got out. For what reason I don't know. It was endemic mostly and becoming epidemic along in August, an unusual time of the year, you will agree. But at the opening of school we had a lap full of diphtheria of the virulent type.

We have, I feel, in a comparable way as good physicians as you would find in any community, who have been taught the necessity of early diagnosis, of early, large dosages of antitoxin. With only three exceptions, I think, these cases were found early. They were given a heavy dosage of antitoxin, and yet our mortality is practically 40 per cent. or just under 40 per cent.

Now, privately I have told friend Ailes that I feel that he has been traveling with a lot of luck. Dr. Orvis, I think, gave him the answer. In a diphtheria free population, his reintroductions will eventually cause him trouble. It can't help it.

Then that calls to my mind this graph (referring to chart) and here again may I take some exception to Dr. Ailes in his line of argument? He shows here in the four-year age group a marked increase in incidence; in the six months, two, and the plus six months —I dare say that's between six months and a year, Dr. Ailes?

Dr. Ailes: The first half of the year and second half.

Dr. Crooks: Three, and then in the first year they jump to 20, and you can see a heavy mounting. Dr. Ailes went on to say that these graphs—his local experiences there—would lead him to believe that intense activity, if activity was to be carried out whatsoever would be in this age group, the six-year child; that he would get rid then of the great portion of this incidence and the secondaries in this age group. It sounds logical. But would it not be better, if there is any efficacy whatsoever in toxin-antitoxin immunity, to get rid entirely of this incidence by carrying out what we feel was good practice, of toxin-antitoxin immunity carried on vigorously from the age of six months through pre-school life? Does it not seem logical to you that we would be saved this incidence and this mortality.

It is a known fact that in the East, in Massachusetts and particularly in the State of New York, they have brought down their incidence until it has become almost negligible in the spots where they have done the greatest amount of immunizing activity. But this experience doesn't always hold 100 per cent. true. However, it is sound procedure.

Dr. Ailes hasn't told all of you, and I am sure some of you do not know, that he is working under, in many respects, conditions that tend toward ideal.

Dr. Ailes: Thank you.

Dr. Crooks: He is not a political appointee. He has an endowment at his right hand, and sufficient money to carry on all of this added activity that he mentions. He has the cooperation as much as any health official, I think, has, and the confidence of his practitioners, and that might be one of the favorable reasons for this low incidence.

I don't hold with one of the other discussants that there may have been missed cases. I hardly believe that is true. I believe it has been merely luck. That he will contiue with such luck is hardly to be believed.

I don't know what other thing I might say, excepting to repeat just one thing, that until we know more about diphtheria, until we know more about scarlet fever, scarlet fever particularly, I believe this to be the wrong time to placate the general public and placate, if you will, even the family physician by lowering our standards of quarantine procedure, until such time as we know much more about it. The very fact that it is mild is no reason why, I think, we should lower our standards of protection, because it has been the experience of every one of you, I am sure, that of the known contacts that you are able to connect up with that you very frequently see a virulent case following a contact with a mild case.

I don't feel that we are in a favorable position right now, and I deprecate some of the changes in the Rules and Regulations that have gone into effect within the State in the last two years, taking away some of the protection in the so-called milder communicable diseases, such as chickenpox, mumps and German measles. Instead of lowering the incidence of communicable discases, my local chart would show you that it has raised it.

Dr. C. A. Earle, Des Plaines: I regret exceedingly that I did not get here earlier. I live forty miles from here and, after driving for an hour, I found we were only five miles nearer Joliet than we were when we started.

It may be presumptuous for me to state the basis upon which I rise to discuss this paper. I happen to be the medical attendant of a large orphanage numbering 1,200 children.

Diphtheria has been the most serious disease we have had there. We lost more cases from diphtheria up to eleven years ago than from all other diseases put together. The year immediately preceding this preventive

work we had eighty-five cases with seven deaths. We have been doing this work for eleven years and we have not had a death since.

It would be very interesting if the essayist of this paper would start a campaign of Schick testing in that community to see how many are really susceptible and how many are not susceptible.

There is an old saying that he who has once been a drinker will drink again. In any town that has not had a case or a death from diphtheria for three years, depend upon it, it will not be many moons before there will be cases and there will be deaths. In my experience, diphtheria begins like a storm out of a cloudless sky. The first thing we know of the presence of diphtheria in a community is the death of some child. LaSalle is no different. Any town north of the Mason and Dixon Line is going to have diphtheria unless they are immunized. Diphtheria in the south is not a serious condition at all; but it is in the north.

To show you the effect during an epidemic, when we had eighteen cases of diphtheria in this institution, we found that the incidence of diphtheria in the Schick negative children was 1 in 732. Seventeen of thirty-four children who were Schick positives got clinical diphtheria, an incidence of one in two.

It is a well-known fact that the incidence of diphtheria is but little influenced in any community until at least half of the children have been immunized.

There is one thing that the health officers have not featured all they ought to do. They ought to preach the gospel of testing and retesting. Several years ago I made the statement that there would be other diseases besides diphtheria in which a test may be of very great importance, and sure enough within a year or two we get the Dick test. And I think the general practitioner, health officers and everybody ought to preach this doctrine of testing the children as often as they can get a chance to do it. In our own community we go into the schools and test all for whom we can get consent. Then we tell them to go to their doctor to be immunized.

Now, just one word as to scarlet fever. Scarlet fever immunization is meeting practically the same opposition as immunization against diphtheria. Even now there are many people who do not believe in it. Once in a while there is a doctor who does not believe in antitoxin. It was not so many years ago that a very prominent surgeon in Chicago wished to know whether antitoxin had actually come to stay. There are a lot of doctors who do not believe in T. A. They do not understand it. To my mind there is no procedure in the whole history of medicine that has a more scientific basis than diphtheria immunization has. It is a mystery to me, in a way, that anybody ever doubted it. If the doubters would have read Theobald Smith's experiments on the guinea pig—and diphtheria in the guinea pig tallies exactly with diphtheria in the human being—and how he told Parks and told the world that children could be immunized the same as the guinea pig, they would certainly have believed in it.

Several of the great pediatricians in Chicago at first discouraged T. A. immunization. Today there is opposition to immunization against scarlet fever.

Some of you have read, and probably you have forgotten, what is being done by some Japanese doctors in Manchuria, where they have so much scarlet fever. A negative Dick test is nearly as sure an immunity against scarlet fever as a negative diphtheria test, in my opinion.

This winter we had scarlet fever in the little town I am from, Des Plaines. Two years ago I tested the children of all that I could get consent for, in a parochial school. Six out of eleven children that showed the positive Dick test got scarlet fever. Not one in that school that had a negative Dick test got scarlet fever.

While the morphological, agglutination, biological and neutralization differences among the various hemolytic streptococci are not great, I believe it has been shown that they do differ, and that a negative Dick test is a fairly sure indication of immunity to scarlet fever.

Dr. I. D. Rawlings, Chicago: Our chairman asked us to discuss the question of modified quarantine. In 1912, when Dr. George B. Young was Commissioner of Health, he authorized me to carry out some experiments as to modified quarantine. We devised what we called three classes of quarantine. Class A was where we had a trained nurse set aside in a room with private toilet facilities and bath. Class B was where someone outside, either a practical nurse or the aunt or some relative, would come in and serve as the attendant in separate room for case and nurse. Class C was where the mother acted as nurse, and practically no isolation was possible. We carried out quite an elaborate experiment with these three classes of quarantine and the result was published in a joint paper in the Journal A. M. A. at that time. The result showed there were no secondary cases of contagion in diphtheria and scarlet fever quarantine if we separated the patient from the rest of the family with a graduate trained nurse that knew all the precautions. We also had much fewer secondary cases where we separated the patient with the practical nurse. With the mother as attendant and no isolation, the result was about as at present with an unmodified quarantine.

We were so impressed with the modified quarantine experiment that we went ahead and used it extensively. We continued modified quarantine until shortly after Dr. John Dill Robertson became Commissioner of Health. Then the Director of Public Health of Illinois came into Chicago and said the supreme court had ruled that it was class legislation for Chicago to have modified quarantine when the whole State wasn't getting it, and they made us stop using the modified quarantine. I went down to Springfield in 1921; I think we had not been there more than eight or nine months before we arranged, where any community could comply with the requirements, for a modified

quarantine. Why Dr. Ailes waited until 1926 to use modified quarantine instead of using it in 1922, I don't know.

Dr. Ailes: I didn't come to Illinois until then.

Dr. Rawlings: It was available anyhow before you came, doctor. We believe very thoroughly in it. And since I have returned to Chicago to the health department the situation there is so different from what it was in 1914 and 1916, or even in 1921, that I am not sure that modified quarantine will work as well as formerly.

No one, I think, has brought out in this discussion the congestion problem in the control of those two major contagious diseases. It has always been a sore spot to me that Chicago has so much more diphtheria and scarlet fever in proportion than the rest of the State; Chicago for years has had a lot more diphtheria than the rest of the State of Illinois, with about the same population as Chicago. We believe one big reason is Chicago's greater population congestion. Dr. Ailes doesn't have the great big apartment houses nor is quarantine in his city complicated by what we call little utility apartments where there will be three families with one toilet and bath off a common hall for each of the three separate little two-room apartments for each of these families. Isolation of the other families if contagion occurs in one of them is impossible. Fortunately, in Chicago we have an isolation hospital and we make it so difficult for the other families there that they bring pressure upon the family with a contagious disease to allow the child to go to the hospital and relieve the quarantine entirely.

I believe thoroughly in modified quarantine where you can get conditions such as LaSalle has and also where conditions such as exist in many of the larger apartments in Chicago, but it won't work in the apartments where you have one toilet and bath for three or four small families.

As to the fatalities in scarlet fever, we find that it is gradually increasing. One point we think is largely responsible for this is the missed case. We have a number of instances of this kind where a child will go home Friday afternoon and have a little vomiting attack, a little temperature Friday evening, and a slight rash which disappears by Monday morning, when patient goes back to school. These children are not seen by the school doctor because our rules only require that the child be sent to the school officer where they have been absent from school for one day or more.

In the mild case in school our experience doesn't agree with that of Dr. Crooks that these mild cases don't spread the contagion. I wish he would come to Chicago and let me show him school room after school room where we get two or three or four up to eight cases out of a school room. We are having many experiences from missed cases of that kind. The Doctors Dick have convinced me that there are scarlet fever carriers as well as these missed cases that convey the disease to others.

COMMENTS ON THE X-RAY EXAMINATION OF THE APPENDIX*

JAMES T. CASE, M. D.,
CHICAGO.

In the acute stage appendicitis is usually not a matter for x-ray investigation. The symptoms and course of the case are much more reliable for the diagnosis than any roentgen findings unless one wishes to exclude a gross lesion of the lungs by a roentgenogram of the chest, or to ascertain the exact location of a lower right quadrant pain in relation to the tip of the cecum, in which case it may be permissible to give the patient a barium enema and to palpate the abdomen carefully under the guidance of the fluoroscopic screen to make note of the relation of any localized point of pain on pressure to the visualized cecal shadow. In an acute case one does not anticipate that the appendix may be visualized nor does he use much force in the introduction of the opaque material by enema for fear of overdistending the cecum. In most of his cases of acute appendicitis the urgency of the symptoms has been so clear that the writer has not thought of employing the x-ray study at all; in a relatively small proportion of doubtful cases the opaque clysma has been used as suggested in the foregoing remarks. It is probably not justifiable to give opaque material by mouth to a case of suspected acute appendicitis. A roentgenogram of the chest does not always show evidence of a pulmonary or basal pleural affection in the early hours of pneumonia or pleurisy; hence, too much reliance must not be placed upon the x-ray study even for that purpose at the moment when an immediate differential diagnosis between pneumonia and appendicitis is often imperative.

Chronic appendicitis is said by many authors to be non-existent; they claim that such a diagnosis is an error of diagnosis. This idea finds some support in the frequency with which we encounter appendectomized patients still suffering from the pains for which the appendectomy was performed. While the writer was on the staff of the Battle Creek Sanitarium, he once made a census of some two thousand consecutive admissions, finding that approximately twenty-five per cent of them had had the appendix re-

*Read before the Section on Radiology, Illinois State Medical Meeting, May 21, 1930.

moved for what was diagnosed as chronic appendicitis, but without relief of the symptoms. A relatively small proportion had undergone removal of the appendix after one or more acute attacks, and these were almost all cured of their troubles; but the majority of the cases had not suffered definite acute attacks with fever, abdominal rigidity, slight leucocytosis, or nausea and perhaps vomiting, but had complained of more or less indefinite right lower quadrant pains or aches for which no other explanation than appendicitis had been considered reasonable; but appendectomy did not afford relief.

Whether or not there is such a disease entity as chronic appendicitis, the fact remains that we are obliged to deal with many cases of chronic right lower quadrant distress, in the investigation of which the roentgenological study is of great value. We all recognize the frequency with which a patient found to have a urinary calculus, especially in the right ureter, is also found to have had the appendix removed. Hence, a preliminary to any study of the appendix region should include a careful consideration of the possibility of ureteral stone or other obstructive urinary pathology. Right adnexal affections, and especially a pelvic peritonitis, often result in adhesions involving the appendix, in the treatment of which removal of the appendix must be associated with the appropriate gynecological surgery.

In the earlier x-ray investigation of the appendix, attention was devoted almost exclusively to the appendix region itself, and to the appendix particularly, with special reference to its size, shape, position, and mobility. One of Europe's greatest radiologists, Groedel, in 1913 made the statement that the appendix was surely pathological if it visualized, since in several thousand opaque meal studies of the alimentary tract he had seen it only twice. Since then much progress has been made, and it is now recognized that the normal appendix should always visualize with the opaque meal. We may not recognize such an appendix at the time of our screen or film studies for several reasons: the appendix may fill and empty so quickly that we do not happen to catch it at the appropriate moment; the appendix may lie closely adherent behind the cecum, as is so often the case when the cecum is elongated and very movable, and empty within the time required for clearance of opaque materials from the cecum. The acutely or subacutely inflamed appendix probably does not fill with barium, though in such case there should be at least a tell-tale localized tenderness on pressure over the region of the appendix as determined by screen-controlled palpation of the visualized cecum.

Later, attention was directed less to the appendix itself and more to the right side of the colon and the terminal ileum. Lane's kink came in for its share of attention. Jackson's membrane, other membraniform structures about the ascending colon and hepaticocolic adhesions held the stage for a while. Dropping of the transverse colon with the mythical resultant kink at the hepatic flexure was widely discussed as a cause of cecal stasis and the resulting stagnation in the appendix. But finally we came to recognize that there were other more potent and reasonable causes for the prolonged delay of fecal materials in the cecum than any of the above, viz, the normal and abnormal manifestations of the motor processes in the colon.

The right half of the colon may be considered as the retort in which nature attempts to finish up the digestive and absorptive processes which are the chief function of the small bowel, and there seems to be normal provision for a prolongation of the stay of bowel contents in the cecum and ascending colon out of proportion to the normal stay of materials in the rest of the large bowel. From the right third of the transverse colon on to the rectum the colon serves the purpose of a conducting tube to carry to the rectum and ampulla waste residues destined for discharge from the body. We find in the right half of the colon that the prevailing peristaltic influence is antiperistaltic or retrograde, and Cannon found in animals that there was a definite contraction ring just to the right of the midline in the transverse colon from which these antiperistaltic activities had their origin. The writer nearly twenty years ago observed a similar contraction ring in the transverse colon of man, his observations being published in the Proceedings of the Radiological Section of the International Congress of Medicine held in London in 1913. The cecum is also the seat of active haustral churning movements, but in addition there occasionally arise in the proximal

colon spontaneous mass peristaltic movements, powerful ring contractions, which carry before them the mass of fecal content of a large segment of the bowel from the right or "retort" portion of the colon, into, and often through, the conducting portion of the large bowel (the remainder of the transverse and the descending and iliac colon) into the discharging portion of the large gut (the lower sigmoid and rectum).

When there is an organic obstruction in the conducting tube, and especially in the distal portion of it (the descending or iliac colon), there is a resulting distension of the cecum and ascending colon. The writer has seen this occur so strikingly that it seems profitable to recall one case. A patient with a small annular carcinoma in the iliac colon, who had never suffered distress in the left side of the abdomen, was brought to the hospital for emergency operation for what was thought to be a ruptured appendix. Operation revealed a rupture of the end of the cecum with general peritonitis, the appendix being a participant in the general inflammatory condition of the peritoneum but not primarily involved. The chief stress from the obstruction in the distal colon had been felt in the cecum and ascending colon, the iliac colon obstruction causing marked exaggeration of the retrograde influences which normally occur in the proximal colon.

We all know how hard it is to cure up a fistula of the cecum by non-operative means, whereas a fistula elsewhere in the colon usually closes spontaneously with ease. Non-malignant organic obstructions in the distal colon also produce distension of the cecum and ascending colon, thereby causing pain on the right side, especially in the tip of the cecum. No wonder in such cases the appendix is found to be dilated or enlarged, sharing in the stasis of fecal contents. And it is not difficult to comprehend how it is that a large class of patients, free from organic colonic obstruction but suffering from irritability and spasticity of the distal colon, also suffer mostly from right-sided symptoms though the spasticity and colitis affect the left colon; for the spasticity of the descending and iliac colon results in a state of contraction of that portion of the bowel operative for a large proportion of the twenty-four hours of each day, with its associated distension of the right side of the colon and the resulting pain in the cecal region which most of these patients find more distressing than the pain over the left side of the colon which is the affected segment. Is it any wonder, then, that many such patients are thought to have chronic appendicitis, or that the removal of the appendix does little or nothing to relieve the symptoms which led to that diagnosis?

However, even in consideration of the foregoing, there are still many facts relating to the appendix which one may ascertain by careful x-ray study. For this purpose both the barium meal and barium enema should be utilized. There are many physicians who seem to depend upon the opaque enema alone for information concerning the colon. This is a mistake. The preceding paragraphs relating to the motor physiology of the colon should make clear that the meal is also necessary in order to avoid some of the most common pitfalls in the diagnosis of chronic appendix disease. Too much emphasis cannot be placed upon the necessity of making a complete gastrointestinal x-ray study with both the opaque meal and the opaque enema in every case.

If the appendix fills (and all normal and many pathological appendices should fill after the opaque meal), we are able to study the question of size, position, length, mobility, concretions, and coincidence with a point of possible pain on pressure. Some of these points are of relative unimportance, but all of them should be recorded in order to include the valuable observations which may be missed unless one follows a routine.

The size of the appendix is variable. It should be recalled that we see in the roentgenogram the shadow of the lumen of the appendix, not the appendix itself. A very large, long appendix may be roentgenologically normal, provided it empties itself easily and does not harbor concretions. An unusually long appendix is noteworthy because of the increased menace to the patient. A narrow, thin line may represent the lumen of an appendix undergoing obliteration. In some cases one sees the proximal part of the appendix of average caliber while the distal part of the organ is registered as a thin line; such a shadow indicates that atrophy has begun in the distal half of the appendix, perhaps as Nature's attempt to obliterate the organ following an acute

inflammation. On the other hand, one may see a club- or bulb-shaped appendix tip with a thinner line of connection wth the cecum; such an aspect indicates much more of a menace to the patient, suggesting that in the past there has been an acute process from which recovery occurred, but which caused a dangerous narrowing of the proximal half of the organ. Occasionally one sees a very wide-lumened appendix, suggestive of a tumor formation. Diverticula have been recorded by Spriggs and Marxer but the writer has never been fortunate enough to have recognized appendical diverticula in a case which came to operative proof. In carcinoma or other organic stenosis of the ascending colon, one often sees a gigantic appendix, which we take it, is a natural result of the overdistension of the cecum caused by the continual arrival of new intestinal contents through the ileocecal valve in spite of the obstruction in the ascending colon.

As above suggested, the length of the appendix is of no great practical importance. Appendicitis has occurred in the very short stump of the appendix left behind after an incomplete appendectomy. It has often seemed to the writer that the appendix in childhood is proportionately much longer than the adult appendix.

The mobility of the appendix may be tested in at least two ways: First, by manipulation with the gloved hand under the guidance of the fluoroscopic screen, one may actually test the mobility of the appendix in relation to the tip of the cecum, the terminal ileum, the abdominal wall, and perhaps the sigmoid; or in lieu of the gloved hand a wooden palpator or distinctor may be used, and the appearance of the appendix under the pressure of this wooden palpator recorded by films exposed while the pressure is being applied. Second, by comparing the appearance of the appendix in several roentgenograms, it may be evident that there are no binding adhesions because in one film the appendix may lie in one position, and at a completely different angle in another, so that its free mobility is self-evident. On the other hand, the mere fact that in several films the appendix may seem to lie in a constant relation to some other viscus by no means justifies the conclusion that adhesions or fixation exist, though it may be suggested; such an appearance should always be tested by actual palpation before a diagnosis of fixation is made. Again, the retrocecal appendix may seem to be freely movable when actually it is usually closely adherent to the cecum and moves with the cecum, the cecum being the freely movable organ. The low-lying, pelvic cecum is usually endowed with a long mesocecum permitting an extreme grade of cecal mobility; and in just this type of mobile cecum it is an anatomical fact that the appendix is nearly always adherent retrocecally.

A record of the ability of the appendix to clear itself of its opaque shadows is of importance. Perhaps the most important functional evidence against the appendix is its failure to empty itself readily. I think we may say that in general the appendix which retains its opaque contents, retains also its non-opaque contents habitually, and that such retention constitutes a menace to the patient—the greater the degree of retention, the greater the menace. Pirie of Montreal told of a case where the appendix retained opaque material forty-two days and on the forty-third day the patient suffered an acute fulminating appendicitis requiring immediate operation. The writer has often seen retention of opaque material in the appendix for a week or more, and in one case an acute appendicitis supervened on the fifth day. A barium concretion probably is of no more significance than a non-opaque concretion, as a menace to the patient.

Non-opaque concretions may be recognized as vacant spots in the appendix shadow, one or more small, rounded or ovoid, clear areas appearing within the opacity representing the appendical lumen. Following the advent of opaque material into the appendix, barium-mixed concretions may form, and appear later as a string of beads, due, of course, to the drying out of the appendical content. The occurrence of concretions, whether opaque or translucent, of course indicates the presence of retention and, just in proportion to the number of days the shadows persist, constitutes a menace to the patient.

Foreign bodies in the appendix are fairly common, aside from the fecaliths above referred to. Calcareous bodies are rarely seen, though in the writer's experience this has been noted perhaps a dozen times. One case may serve to illustrate the significance of such calcifications: A young man who had undergone an emergency operation

for ruptured appendix with general peritonitis, for which simple drainage was done without appendectomy, returned to the clinic about six months later with a renewal of symptoms indicating appendicitis. A roentgenogram revealed a calcareous shadow near the tip of the cecum, bearing a constant relation to it, and moving with the movements of the cecum. Another operation revealed an appendical calculus, which, of course, had not been found at the first operation. Among appendical rareties, the writer has also had cases of common pin, birdshot or beads and similar foreign bodies in the appendix, and two cases where an ordinary sewing needle had found its way from the cecum into the tissues of the mesoappendix.

Rupture of the appendix is ordinarily not a matter for roentgenologic research, for the urgency of the case is such that operation is done at once. However, there has recently been published the roentgenograms of a case of rupture of the appendix with periappendicular localized abscess, well walled-off, where the opaque enema penetrated into the abscess pocket and gave a characteristic shadow.

Unusual positions of the appendix are often observed. The inverted cecum with the appendix showing along the lower costal margin is perhaps the most common of the striking anomalies of position. A little ingenuity of technical manipulation during the fluoroscopy will permit detection of the inverted cecum and account for the high position of the appendix. A true left-sided appendicitis may occur in a case of complete transposition of the viscera, or in incomplete rotation of the colon. A young woman who gave a history of two acute attacks of appendicitis, where the attending physicians felt sure there was no question of adnexal disease, was referred for surgery with a request for a very small incision; through the small opening the writer could find nothing but small bowel, not even any omentum, until it suddenly occurred to him that he was dealing with a case of incompletely rotated colon and that the appendix would be found on the left side. Lifting up the wound edge with a retractor, he reached over well to the left side of the midline and was able to seize and draw over to the right-sided incision the freely movable cecum and to remove the appendix without difficulty. When in doubt as to the situation of the appendix, it does not harm the patient to make a pre-operative opaque injection of the colon for the information such a test will give concerning the morphology of the cecum.

Another unusual anomaly of position of the appendix worth mentioning is within a hernia. Our experience includes several cases of appendix within an inguinal hernia and one with a ventral hernia.

After operation for removal of the appendix, it is often interesting and helpful to study the cecum, with reference to sacculation at the site of the appendical stump, fixation of the cecum to the abdominal wall (the result of the operation or of the appendicitis which led to the operation), or distortion of the cecum attributable to adhesions which must be differentiated from neoplastic distortion; and in an occasional case it is surprising to find that the appendix is still present in spite of the history that it has been removed. However, one should be extremely careful about reaching such a conclusion in the face of a history of an appendectomy, for strings of barium-mixed mucus in the terminal ileum or a fine layer of barium retained on the wall of the cecum and seen on profile may resemble the shadow cast by the appendix and lead to erroneous conclusions.

Some years ago Bastedo called attention to the production of pain and tenderness in the right iliac fossa (at McBurney's point) on inflation of the colon by means of a rectal tube, a sign which he thought of value in chronic appendicitis. Long ago the writer observed that a similar sign is often elicited in appendix disease when the patient is given the opaque enema; shortly after beginning the injection of the opaque material, the patient often complains of pain in the cecal region.

One should not lose sight of the evident fact that an x-ray examination of the appendical region during the interim between acute attacks may fail to give any evidence upon which to support a diagnosis of recurrent appendicitis. In other words, just as an interval operation for the removal of an appendix which has certainly given rise to acute attacks may show up an appendix of apparently perfectly normal appearance the removal of which gives complete relief, so also roentgen study during an interval of

quiet between attacks may show no x-ray evidence of abnormality.

It is thus apparent that much information can be gained concerning the appendix through x-ray study, especially if one employs both the opaque meal and the enema. Some of the information is of interest but hardly of practical importance toward a diagnosis of a surgical lesion. However, the location of the tip of the cecum, whether high or low in the abdomen, whether fixed or movable; the coincidence of a point of localized pain on pressure over the tip of the cecum; the presence of appendical retention, especially when persisting for several days after emptying of the cecum; the presence of concretions or other foreign bodies in the appendix; the existence of partial obliteration of the proximal portion of the appendix with clubbing and distension of the distal half; demonstration of definite adhesions of a disturbing character—these are x-ray signs of value in the diagnosis of appendical disease, and we believe they are well worth investigating. Carman once made the statement that the value of the roentgen signs of appendicitis appeared to depend not only upon the examiner's endeavor but also, to some extent, upon the degree of his enthusiasm. This is true only to a certain extent. There are a great many things about the appendix, useful toward a diagnosis and toward a recommendation for therapy, which one may learn by careful roentgenological investigation.

303 East Superior Street.

DISCUSSION

Dr. O. M. Walter, Chicago: Our essayist has presented a most interesting paper on the x-ray study of the appendix. There are few ailments which are met with so often in the practice of medicine which are so frequently misdiagnosed as acute or chronic appendicitis.

Fixation of any normally movable organ usually brings about untoward symptoms. The appendix is no exception to this rule. The abnormalities of the lumen which can be studied very satisfactorily with the x-ray have a very important bearing on the function of the appendix. We may not recognize chronic appendicitis as a disease entity, but there are chronic conditions in and about the appendix which do cause symptoms, and which may bring about an acute attack of appendicitis. Tubercular appendicitis may be a true chronic inflammatory process of this organ.

Nearly all deaths from appendicitis could have been prevented. They may have been due to procrastination on the part of the patient or the physician, but are more often due to misdiagnosis, or a belated diagnose. Anything which will assist in making a more accurate diagnosis of pathological conditions of the appendix should be welcomed by the medical profession.

Dr. Isaac Gerber, Providence, R. I.: I was very much interested in Dr. Case's presentation. For a good many years I have been following his work about watching the effects of various disturbances of the left side of the colon showing symptomatology in the lower right quadrant. I have been particularly interested of late in watching the manifestations of functional disturbances that one gets by very careful study of barium enemas.

I should like to ask Dr. Case whether he can tell me anything about the significance of increasing the antiperistalsis in the distal half of the colon. There is the normal site for antiperistaltic movements, but in a large group of cases I have seen where you introduce a slight amount of barium through the tube, it fills out the rectum normally; you shut it off and within fifteen seconds, with no pressure at all from the irrigation, that material will be passed back rapidly to the cecum and begin to pour into the cecum with spastic action in the descending colon. If you will admit more into the colon you can watch each portion go in the same way with extreme spasticity of the descending colon and rapid antiperistaltic movements.

In these same cases, after defecation you will frequently find the cecum dilated and containing a more dense barium shadow than it contained before defecation. I can do nothing more than describe it to the physician who has referred it to me in the absence of adequate anatomical basis for it and hope that perhaps he will understand.

There is another thing with regard to the appendix itself. During the past three or four years the Viennese roentgenologists have been using Czepa's method which has become very popular. This is a very simple and very practical way to visualize the appendix when not otherwise shown. If by the forty-eight hour examination you are convinced there is some pathology in the neighborhood and yet you cannot see the appendix, if there is a sufficient amount of barium still in the colon let the patient go home and that afternoon take a good sized dose of Epsom Salts and come back in the morning for examination. If there is not much barium in the tract you can mix salts with the barium sulphate and have him report the next morning, some eighteen hours afterward.

The theory is that the Epsom salts exacerbate the normal anti-peristalsis in the proximal half of the colon and by that continued peristaltic contraction enough barium is forced into the partially obstructed appendix in cases where under ordinary conditions you cannot see the appendix. By this simple method one can very often clinch definitely a diagnosis of pathological appendix.

Dr. I. S. Trostler, Chicago: Within the last two months I have had three patients referred to me with

pain in the region of the spleen and on fluoroscopic examination thirty hours after a barium meal, I found that the pressure over the visualized appendix caused the pain in the splenic region. In those three cases I made a diagnosis of referred pain due to diseased appendices. All three cases were operated on and all proved to have chronic inflammatory appendix disease.

Dr. J. T. Case, Chicago: Acute appendicitis is like a fire; in its presence, one cannot delay to make time-consuming investigations. Most of the remarks made by Dr. Walter I agree with thoroughly.

Regarding Dr. Gerber's remarks, I would not think of giving barium by mouth in a case of acute appendicitis. As to antiperistalsis, about seventeen years ago I published a report regarding this matter. It was the report of a case in which preoperative administration of epsom salts had dammed up the opaque material in the cecum so that it was practically impossible to dislodge it by cleansing enemas preparatory to operation, although in a previous barium meal study carried out a week or so before the opaque materials passed through with ease. I advanced the theory then that these irritating purgatives exaggerate antiperistalsis and should not be used as a means of cleansing the bowels preparatory to a surgical procedure.

ACTIVE TREATMENT OF THE COMMON COLD IN CHILDREN

WILLIAM J. CORCORAN, M. D.
CHICAGO

The common cold is such a simple ailment that it is difficult to explain why we know so little about it. Until recently text-books mentioned its high morbidity rate and little else. The fact that colds, like pimples, were considered uninteresting minor disabilities rarely causing death, may partly explain our lack of knowledge concerning the cause and pathogenesis of this most common of all human maladies. Failure to determine the active cause of the common cold, however, has not been because of any lack of careful research, but in this, as in other diseases of unknown etiology, the field of therapeutics is wide open.

Shibly, Mills and Dochez[1] recently reported the results of experiments with chimpanzees in the production of the common cold. These investigators came to the conclusion that the contagious cold in humans is caused by a filtrable agent, most likely one of the group of so-called sub-microscopic viruses. The authors make the significant statement that the common cold infection stimulates into greater activity the potential pathogen viruses which may happen to be present in the upper respiratory tract. This may explain the marked secondary activity of such organisms as the pneumococcus and streptococcus hemolyticus which not uncommonly lead to the severe sequelae of the common cold. The work of Long and Doull[2] in which human volunteers were inoculated with the filtrate from the nasopharyngeal washings obtained from patients during the first forty-eight hours of the common cold substantiates the hypothesis that the contagious cold is caused by a filtrable virus.

If we could be certain that the common cold would remain a common cold, we could, with patience, await final word from the laboratory concerning its cause and prevention. In the meantime, and so long as sequelae of serious consequence follow colds, we should accept the present-day dicta of prevention and we should not consider the running nose any less worthy of our most careful supervision than the more dignified diseases.

Those who are versed in the principles of hygiene know that all factors which lower the resistance of the respiratory tract deserve consideration in the prophylactic treatment of the common cold. And in a sketchy sort of manner allow me to enumerate some of these predisposing conditions as they occur in children. Foremost, is poor nutrition. And this is not gauged by reference to a weight chart alone, but rather does it imply the child whose hemoglobin count is low, whose muscles of respiration are weak, and whose tissues are soft and flabby. This is the group of chronically-tired children who do not get anywhere near the number of hours of sleep they require. Rickets produces increased sensitiveness of the mucous membranes of the respiratory tract and may be ranked just below poor nutrition. Enlarged or infected adenoids and tonsils; and congenital or acquired heart disease are other factors. Chilling of the body surfaces, wet feet, improper clothing and the rapid variation of climatic conditions such as is common in many localities are, likewise, prohpylactically important.

In no way meaning to take issue with laboratory investigators, I sometimes wonder if the common cold is always primarily an infection, rather than an infection which follows hyperemia of the nasal tract induced by non-bacterial agents now generally considered as predisposing only.

A variety of divergent views and theories have

been offered for the active treatment of the common cold. But whatever plan is followed clinical experience supports the contention that treatment is largely a matter of nursing care and strict attention to details of hygiene. Assuming this to be true the following several divisions of treatment, seasoned here and there with a plea against overtreatment, are proposed.

Rest in Bed. At the onset of a cold the child should be put in bed and should be required to stay there for 24 hours after the temperature has returned to normal. He should be isolated from other children of the family. Breathing is made easier if the head of the bed is elevated. The temperature of the room should be between 70 and 75 degrees F. Many think the temperature should be kept at 65 degrees F., but children with a simple cold resent being put in bed, and many of them will not lie under the bed covers unless a nurse stands guard duty. Chilling of the body surfaces is less likely to occur at the higher temperature. Humidifiers, or wet towels placed over the radiators, are valuable in maintaining proper moisture in the room. Fresh air should be admitted through a window open from the top.

Daily Bath. For the very sick child with hyperpyrexia a sponge bath is preferable. The sturdy child whose temperature range is between 100 and 102 degrees may be given a full tub bath. The bath water should be about 98 degrees F. A full tub bath given quickly, followed by brisk rubbing with a towel is invigorating and an adjunct to body-surface elimination. Most children feel better after a bath.

Daily Bowel Movement. During a siege of illness physical inactivity and decreased intake of food lessen the urge which provokes normal bowel activity This is not always the case, however, since not a few children continue to have regular bowel movements throughout a long sickness. A great many authors put forth that a physic should be given at the onset of a cold. Castor oil and calomel have not yet given up the vogue which dates back to, as legal documents proclaim "man's memory runneth not to the contrary." A child should have a bowel evacuation once in 24 hours, but if the patient has had the habit of regular bowel action at the time of onset of illness there is no more indication for giving castor oil, or other physics, to increase bowel activity than there is in giving, let us say, strychnia to accelerate the heart's action. If the bowels are sluggish a warm cleansing enema or a mild laxative is indicated. If those who deplete a sick little youngster with large doses of castor oil or calomel were to take, themselves, an amount of the same multiplied by the difference in age and weight, the expression "give him a good physic" wouldn't be so popular. Possibly purgatives have a place in the treatment of some disorders, but not here.

Diet.—Nature isn't out of step when she brings about lessened appetite in sick children. With few exceptions it is wise to allow a child with a cold to eat just about what he wants to eat of the normal diet for his age. The pale, undernourished child certainly needs food to replace the tissue waste incident to infection and fever, and such a patient should be urged to take small amounts of highly nourishing food at frequent intervals. Cereals, purees, custards, jellies, honey, maple syrup, fruit juices, toast, rice, milk, and stick candy are all well adapted for this purpose.

Many physicians will not allow milk to the child sick with an upper respiratory infection. The practice of prohibiting milk is becoming so general among pediatricians, as well as among general practitioners, that it warrants a few words of comment. The rationale of diluting the milk formula of bottle-fed babies, and of decreasing the milk intake of older children who have gastro-intestinal symptoms during the course of an upper respiratory infection is therapeutically sane. Milk as an exclusive food predisposes to intestinal trouble because it is an excellent culture medium for the growth of pathogenic bacteria activated by an upper respiratory infection. In infants, and in those older children who have symptoms of enteric disturbance, cow's milk should be skimmed, boiled, and reduced to a minimum, or omitted entirely. In these cases, protein milk, barley gruel, and rice water are excellent substitute foods.

Children, however, who do not have at the onset of illness a gastro-intestinal disturbance may, and should, have milk if they like it. I have allowed milk sparingly to some, freely to others, and not at all to many. As yet I am not convinced that children who are forbidden milk during the course of a common cold recover any

more promptly than those who are allowed milk as a part of their dietary. Nor have I noted any difference in the frequency of intestinal sequelae when the cold was uncomplicated at the onset.

Candy as a food for sick children is not a fancy of mine nor a fad of pediatrists. Pure, clean, stick candy is a wholesome, easily-digested food which is taken readily by sick children even when the sight of other foods produces psychic nausea. You know how often acidosis stalks the child's sick-room, and you know, too, how quickly it vanishes when a little sugar and fruit juice is given the patient.

Local Treatment and Medication.—Many physicians advocate instilling into the nostrils a few drops of one of the silver protein solutions during the course of an upper respiratory infection. The silver salts may be of benefit during the first day or two of a cold, but their value is doubtful after the thin mucus nasal discharge has become mucopurulent. The secret of local treatment lies in keeping the nasal passages free of obstructive secretions. Selection of a method to insure free drainage should be governed by the intelligence and skill of the mother or nurse. Fair results will be obtained by using small cotton applicators to free the nasal openings. Following this the child should be urged to blow his nose gently if he has acquired the knack. Better drainage follows if the nasal mucosa is freed of tenacious secretions by means of suction with a soft-tipped rubber bulb. A more efficient means of keeping the nasal passages open is by the use of the weekly-alkaline nasal douche. Very few mothers, and only the most skillful nurses, should be entrusted to give the nasal douche, since middle ear and accessory nasal sinus infection not uncommonly follow the careless use of this procedure. For this reason the mother or nurse should be instructed to allow only a gentle flow of fluid through a soft-rubber catheter. The child should be placed with his head over the edge of a table, face down, when the nasal douche is given. A medicine-dropperful of liquid albolene instilled into each nostril following the douche soothes the mucosa in a gratifying way. Many rhinologists suggest spraying the nostrils with one of the ephedrine or adrenalin preparations following a nasal douche. This may be especially valuable in those cases of common cold which are complicated by paranasal sinus envolvement. And a good many colds are so complicated.

Fever accompanying nasal colds is usually moderate, although infants and very young children may have a wide range of temperature. I know of no better fever depressant for the child with cold than aspirin. It may be given in a dosage of one grain every three or four hours to the child of one year; two grains to the child of two years; and so on up to five grains, three or four times daily to the child of five years.

Cough is an annoying symptom which too often deprives sick children of much needed rest. The coughing effort in very young children is unproductive and the distress which it causes is physically and mentally depleting. Respiratory sedatives should be given, and of these there are many to choose from. Combined with a sedative it is often beneficial to give atropine which has the property of lessening the secretion of mucus. Children tolerate atropine very well, and the opiates not so well. The vigorous child of two years who takes fluids freely may be given, for example, 1-30 grain codeine sulphate with 1-1000 grain atropine sulphate, in simple syrup, four times daily.

The pharmacological action of the commonly prescribed carbonate and chloride of ammonium warrants the dogmatic statement that they do not belong in cough mixtures given the child with cold. The ammonium salts are irritating to the gastric mucosa and their tendency to produce vomiting and diarrhea too often leads to an exhausting complication of the gastro-intestinal tract. The widespread use of several well-known proprietary salves and imbrocations charged with menthol and other volatile substances, reminds one of the pungent brews our ancient medical forebears prescribed. Doctor John Ruhräh, writing about physicians of ancient and medieval times, and whose entertaining articles appear each month in *The American Journal of Diseases of Children,* will remind us one of these days that the use of these preparations is old stuff, and that we ought to know better.

REFERENCES

1. Shibley, G. S., Mills, K. C., and Dochez, A. R.: Jour. A. M. A., 98:21. (Nov.), 1930.

2. Long, P. H., and Doull, J. A.: Proc. Soc. Exper. Biol. and Med., 28:53 (Oct.), 1930.

PERSONAL HYGIENE AND PUBLIC HEALTH*

G. KOEHLER, M. D.
Assistant Commissioner of Health
CHICAGO

Forty years ago 23.2 per cent of deaths occurring in the City of Chicago were due to infectious diseases. Now only 10.4 per cent are attributable to this cause.

Forty years ago the most frequent causes of death were pneumonia and bronchitis, tuberculosis, and diarrheal diseases, which were responsible respectively for 15, 10 and 12 per cent of all deaths, and together for 37 per cent of the total number. Now heart disease is responsible for 20 per cent, nephritis for 11.5 per cent, and cancer for 9.5 per cent of all fatalities recorded; these three together now causing 41.0 per cent of all deaths.

The average age at death in 1885, in Chicago, was 20 years, 4 months and 26 days, as compared with 44 years, 5 months, and 11 days in 1928. The U. S. Census returns show that in 1900, 10.2 per cent, in 1910, 11.3 per cent, and in 1920, 13.6 per cent of the population was over 50 years of age. It is predicted that the 1930 Census will show 17 per cent of the City's population over 50 years of age, and that this figure will reach 23 in 1940.

This is a situation that deserves attention and careful consideration for it will have a tremendous effect upon the economic conditions and social life in the future. It will present new problems to the health and welfare agencies of communities and will call for an ever greater participation of the medical profession in the conservation of the public health.

Let us not fail to foresee and meet this change in the age distribution that is destined to occur in our future population. When a similar saving in lives of infants was gradually being made during the last twenty years, which resulted in reducing the infant mortality rate from 122.3 in 1910 to 60.0 in 1929, school boards and other agencies charged with the care and education of children failed to foresee the increase in child population that resulted from a 50 per cent reduction of the infant mortality and consequently did not provide the necessary school buildings, or other facilities for education and care of the increased number of children that lived through the period of infancy.

The task of caring for an ever increasing population over 50 years of age, and keeping this group in a state of maximum attainable health and efficiency, is one that must be met in the near future; even within the next 10 years this problem will be of major importance. This task will be an individual problem, to be solved by each person himself. In this he will require the professional guidance of his physician. The personal hygienic measures necessary to keep this population of elderly persons well must primarily be adapted to each individual, after a periodic physical examination, and be based upon sound medical knowledge. Such service cannot be rendered en masse by health departments or any other agency. It can be rendered efficiently only by physicians who have made repeated examinations and observations of the persons seeking advice and who have the knowledge of the idiosyncrasies and physiologic responses in each individual case.

The problem is therefore quite different from what it was in ridding the community of cholera, malaria, typhoid, dysentery, or even tuberculosis and similar communicable diseases, where governmental action was necessary to stamp out the sources and carriers of infection. The measures found effective in stamping out these diseases, such as the providing of safe water, milk and food supplies, installation of adequate drainage systems, preventing atmospheric pollution with smoke and soot, isolating sources of infection by quarantine and hospitalization, and the finding and isolation of carriers of the disease, were community problems in the handling of which individual rights and opinions had to acquiesce to the interests and demands of the majority. Although these measures were based on medical and engineering knowledge, they could not, except in isolated instances, be applied individually.

The medical profession deserves a great deal of credit for dealing with these community problems in an entirely altruistic manner as is shown by the history of these movements in every community of the country. In Chicago we find eminent members of the medical profession, such as Doctors W. B. Egan, J. C. Goodhue, B. McVickar, Daniel Brainard, N. S. Davis, Hosmer

*Read before the Illinois State Medical Meeting, Section on Public Health and Hygiene, May 20, 1930.

A. Johnson and John Rauch, leaders in the movement for sanitary reform and the institution of measures for the control of epidemic diseases. The sanitary history of every city of the state shows the same altruistic leadership of the medical profession in instituting sanitary reforms and improvements.

PERSONAL HYGIENE A NECESSARY FACTOR IN MAINTAINING PUBLIC HEALTH

From the foregoing it is evidenced that personal hygiene must be relied on more and more in the future for maintaining the public health. Time will not permit the discussion of the indications and effect of the various hygienic measures to be followed by individuals for maintaining their health, nor is it the province of the health officer to tell the medical profession what personal hygienic measures they should recommend for their clientele. Personal hygiene must necessarily be largely a personal matter. Some persons may be harmed even by a little drinking, or by smoking or gormandizing—others not at all. The Germans have done a lot of work recently showing that family trait is an important factor in such matters.

It is not the province of the health officer nor of the doctor to take the joy out of life. The people at large will not heed general taboos which seem to interfere with their pursuit of happiness. Individually they will and should listen to their personal medical advisor in such matters.

This paper is concluded by the enumeration of a few general principles which must form the basis of enlisting the practice of personal hygiene in maintaining the public health of the future and briefly suggesting a plan by which health officers and the medical profession can cooperate to extend to the public the full benefits of the available medical knowledge relative to securing the highest degree of personal health and efficiency.

It should be the health department's function to educate the public by pointing out the dire consequences of the neglect of personal health, to show the necessity for changing and adapting the mode of life in persons afflicted with irreparable defects of bodily structure and in this connection, to urge the necessity for periodic medical examinations of all persons, children as well as adults, so that the required corrective measures can be instituted before permanent impairment of structure and function results.

Even in this educational work the cooperation of the medical profession is necessary, for in the last analysis, individuals will be guided by the advice of their physicians, in undertaking a regimen for the improvement of their health. Therefore there should be a clear understanding between the health officer and medical profession in conducting the huge and never-ending task of educating the public.

The function of the practicing physician divides itself into two main categories, one that of keeping the well individual well, the other that of preventing the progression of certain chronic diseases and obtaining the least impairment of function in persons already afflicted with some irremediable bodily defect; in other words, showing such persons how to live with certain diseases like heart disease, nephritis, arterio-sclerosis and similar disorders.

Although this may be considered a phase of curative medicine it nevertheless will be an important function in maintaining public health in the future, when 20 to 25 per cent of the population is over 50 years of age. The usefulness to society of these aged people must be maintained up to 70 years as far as possible and they must be prevented from becoming a burden upon themselves, their families, or upon the community.

Conclusion: The conclusion from this cursory survey of the relationship of personal hygiene to public health is that there is a very close relationship, but this does not mean that health officials should undertake to make periodic physical examinations of individuals, and prescribe a health promoting regimen for them, but that this work must and will be done by practicing physicians.

Further that the necessity for such work will become of greater and greater importance when, as is now rapidly occurring, a larger and larger part of our population is constituted of persons over 50 years of age, on account of the saving of lives accomplished in early years, by the prevention of infectious diseases, better medical, surgical and obstetrical care, and greatly improved environmental conditions.

Lastly, that it be the function of health agencies to educate the public in regard to the

necessity of availing itself of the knowledge of personal hygiene possessed by the medical profession, so that the increased span of life now thrust upon individuals by sanitary measures on the part of the community may be lived more happily and with the greatest possible benefits to society.

DISCUSSION

Dr. John W. H. Pollard, Evanston: In beginning this discussion I would like to compliment and sincerely compliment Dr. Koehler on his presentation in an exceptionally original manner the necessity of periodic physical examinations. I think he took the right stand when he states that the responsibility for a physical examination is in the hands of the family physician and is not primarily a health department activity.

His reference to the incidence of disease relative to cancer, heart disease, etc., and the important place which these diseases take in the frequency of the cause of death is exceptionally important and interesting as well for the reason that the whole picture of the principal causes of death has gradually been changing in the past 20 or 25 years. Diseases which are due to environmental conditions, like the contagious diseases, etc., were the principal causes of death 50 years ago. They have fallen into the background and now we are beginning to approach a different group of principal causes of death which show the reaction of continued work and activity upon the body. In other words, the body has been given the privilege of coming through the adolescent period and stepping into adult life, and now it is a case of wear of the organs which go to make it up, in an increasing percentage of the cases.

In Evanston I recently became interested in the principal couses of death of twenty-five years ago as compared with those of 1929. Our records are pretty fair from 1908 on. I tabulated the ten principal causes of death then, and then worked through each year including 1929. With one exception, and that was organic heart disease, the causes of death varied and many gradually but consistently dropped lower in the list. I think from 1908 until 1929 inclusive, with the exception of three years, heart disease was the principal cause of death in that city. Tuberculosis dropped from fifth place to eighth place. Cancer rose from fifth place to third place. This, I think, gives you a fair cross-section of the situation which must be faced. From now on it is going to become more and more a problem of conserving the life of the middle-aged, of the individual who has the good fortune to step into the sixties and possibly beyond than it has in the past.

I think that Dr. Koehler has taken an exceptionally interesting and novel stand and has presented it in an exceptionally novel and interesting way.

I regret that I cannot coordinate more fully with Dr. Koehler's topic, as circumstances prevented my receiving a copy of his paper in advance of this meeting. Under the impression that the general topic was to be "Personal Hygiene," it was suggested that I present for discussion one phase of personal hygiene, viz., "Mental Hygiene." Acting on this suggestion, I have hastily prepared, in the short time available, this little paper on Mental Hygiene of Adolescence.*

Dr. John M. Dodson, Chicago: There are just two things I would like to mention in reference to Dr. Koehler's paper. I think, of course, as we all do, that one of the major and growing functions of all health departments is to direct and stimulate the education of the public, but it is primarily a function of the family doctor—of the doctor himself. Until we have the physicians of the country regarding themselves as an integral part of the health department, as the health officers or advisers of their families, we shall not get as far as we ought to go with this matter. The function of the health official is to stimulate the education of the public, in all feasible ways.

In reference to the discussion about sex hygiene, I was glad to see the emphasis laid on the parent as being the proper functionary. There is a growing tendency among educators to make this a school matter, to put sex education into the hands of some of the teachers. One cannot overlook the shameful and all but universal neglect of this matter on the part of the parents. At the same time I feel it is a serious mistake to turn it over to the teacher. This matter belongs to the parents but it belongs also to the family doctor. It is the business of every family doctor to interrogate the fathers in his clientele as to whether or not they have brought this subject to the attention of their children and to point out to him its extreme importance. If the father feels unequal to the task, the doctor should ask him to bring his son to his office and let them talk it over there together. It is not a matter to be turned over to the schools or educators primarily. One of the encouraging things in this connection is the nation-wide movement that is going on now, especially in the parent-teacher's associations represented in the National Congress, to wake up parents to their responsibility in this matter. The two chief things that that Congress is doing at this time are first, to look after the health and physical condition of children in school, especially at the entering period and, secondly, to educate them for parenthood.

*Illinois Medical Journal, February, 1931, page 154.

ABDOMINAL PAIN IN CHILDREN*

JOHN F. CAREY, M. D.
JOLIET, ILL.

Before a group of general practitioners such as make up the greater part of the State Medical Society I feel as though it is some of the more frequent problems which, however trivial, in some cases are the more worthy of our consideration and discussion.

*Read before Illinois State Medical Meeting, Section on Medicine, May 22, 1930.

Thinking back over a ten-year period I can recall no condition more common, no problem more complex than abdominal pain in children. I realize that early diagnosis is essential, especially regarding appendicitis, where there is such a tendency in early childhood to rupture and general peritonitis. Appendicitis is practically the only surgical condition which may be confused; other conditions such as intussusception, etc., have as a rule classic symptoms. The purpose of this paper, then, will be to call attention to some of the conditions in which abdominal cramps occur and to emphasize the great importance of non-surgical disorders.

There is a medical as well as a surgical abdomen the differentiation of which will often avoid needless operation or prevent a case of appendicitis from rupturing with subsequent general peritonitis. To me it is one of the most perplexing problems of differential diagnosis in medicine. We may have a croup with negative culture or a congenital lues with a negative Wassermann or a negative x-ray in osteomyelitis, but none will cause us more alarm than the sick child with pain in the abdomen. These conditions, the diagnosis of which rests upon laboratory findings, makes the more recent graduate appreciate the fact that we must first look upon the old-fashioned methods in our guidance, if we hope to diagnose the case early.

I am perhaps bold to believe that the trained pediatrist has a broader outlook on the significance of abdominal pain in children than the surgeon who is confronted more often with the border line cases of surgical belly, that come to him for differentiation. However, we should never feel too confident.

In one case I recall having seen a child with a good surgeon, with whom I had seen previous cases of acute abdominal pain. After three days of deliberation he removed a gangrenous appendix.

Case of baby, eleven months old, poorly nourished, with a poor feeding history, developed a mild throat infection—temp. 100.5 degrees, frequent bowel movements. The abdomen was somewhat distended. After I had watched this case, which had been referred to me by a surgeon, for three days, we finally decided it was a general peritonitis or that an exploratory laparotomy was indicated. Operation revealed a ruptured appendix and a belly full of pus.

In discussing the medical abdomen from a pediatric standpoint, we must discuss the different types of pain and conditions which produce them. In infancy one of the most frequent causes is some sort of indigestion. In certain infants there is a nervous instability peculiar to early life. It is not wrong to assume that the bowel shares in this individual peculiarity, so there may be, if I may use the term, a "nervous bowel" which at the slightest stimulus goes into contraction, the same not occurring in a less nervous child.

I have observed several children with pain in the abdomen following the ingestion of raw milk; some may be due to the inability of the infant to tolerate an average amount of fat. The same is found to be true in giving different kinds of sugars which no doubt explains the fact that just a change of the type of sugar frequently relieves the symptoms. Many mothers will state that a change from cane sugar to Mellin's Food gave immediate relief, or vice versa. One has frequently observed that the ingestion of cereals causes pain, particularly wheat cereals. It is not at all uncommon that the use of rice water in preparing a formula, is followed by the disapperance of symptoms which barley water, etc., seems to produce.

There is also the gastro-intestinal type of irritability which is relieved by atropine. Early tetany is relieved by calcium salts.

Case of baby five weeks old, normal delivery. At four weeks of age the baby showed signs of irritability, doubling his legs upon his abdomen, frequent bowel movements, vomiting and very frequent convulsions. The temperature was normal, the reflexes were normal. The convulsions were generalized. A spinal puncture revealed normal fluid under normal pressure. The blood calcium was 5.5 mgms. Calcium lactate in the dosage of 60 grains per day, Viosterol 1, M. V.—B. L. D. together with quartz light therapy raised the blood calcium to 7 mgms. at the last determination and no further symptoms have presented themselves.

Tetany does occur earlier than we are led to believe. I have seen three other cases under five months of age.

There is a class of older children which the physician sees frequently, the mother stating that the child is growing thin, the lower eyelids are puffy, there are dark circles under the eyes, the child sleeps badly, has night terrors, talks in its sleep, and grinds its teeth. The mother as a rule must force the child to eat. He frequently has

not time to eat and is in a hurry to get back to school or to play. The rapid ingestion of food is followed by a severe attack of colicy pain in the abdomen. There is no question that hunger causes pain, as does too rapid ingestion of food. Rest in bed and proper management of the child by a nurse or attendant, on a balanced diet will prove of utmost value.

Constipation I do not believe should be included in the list of probable causes; however, there are a certain number of children who will not take time to go to a toilet, and a resultant impacted mass of feces may cause some pain on defecation or when nature attempts to warn the child. The same may be said of anal fissures or in the congenital small anus.

I have never seen intestinal parasites cause pain; nor in children who have parasites have I ever been able to obtain a history of previous attacks of pain.

The last group of cases which I wish to discuss is that in which abdominal pain is associated with or follows certain parenteral infections. Very frequently the onset of an acute infection is ushered in by colicy pains in the abdomen. A child old enough to designate pain will point to the navel or an inch or so above it. A baby will flex its legs on its abdomen and the abdomen is tense. This is more often present in so-called "intestinal grippe," but it is present at times in pneumonia, scarlet fever, and acute throat infections. It need not necessarily be acuate in origin, as chronic respiratory infections are frequently observed as the cause of colicy pain in the abdomen. This is frequently an initial symptom and may appear after the original infection has subsided. In all cases of intermittent abdominal pain one should look most diligently for chronic respiratory infection, as it is so often the clue to hidden infections about the tonsils, adenoids, or siuses.

The case of Ann P., three and one-half years old. After the onset of a cold and bronchitis, this well-nourished child continued to have a temperature of 100 to 102 degrees. This lasted for eight weeks during which time on at least three occasions we observed the case because of abdominal distress but did not venture operation. A Von Pirquet test and x-rays of her chest were negative. The tonsils were removed and the child has had no temperature to date and no further signs of abdominal distress.

We have all observed laparotomies where the appendix has been removed which to our minds did not alone account for all the symptoms present, the so-called "catarrhal type." The majority of these cases examined thoroughly before operation show signs of upper respiratory infections. Evans, quoted by Brennemann, states that 86 per cent. of the total cases of appendicitis showed a demonstrable primary upper respiratory infection and appendicitis was much more frequent in epidemics of colds. The most frequent cases or the cases which will cause us more alarm over the associated appendiceal lesion are those in which there has been an enteritis present with throat infection. In light of our present knowledge and experience throat infections should not throw us from the diagnosis of appendicitis, but rather put us on our guard for the closer observation of those cases where there has been a history of frequent bowel movements and occasional vomiting.

Abdominal distension always makes a diagnosis difficult especially where it occurs in toxic cases of pneumonia or acute throat infections. These cases are frequently fatal and after we have lost a case we cannot help wondering if it was just a toxic ileus or if there has not been a peritonitis present also, as I am becoming more convinced that with known foci there must be a great possibility of the spread of this infection whether it be hematogenic or enterogenic in origin.

In children under three or four years of age in whom nausea is difficult to distinguish from real distress, one is often confronted with another problem. In the cases of "hyperemesis heimis," discussed by Zahorsky, or the epidemic acidosis cases so frequently seen during the season of colds there is no flatulency and the pains are not sharp and intermittent and accompany the first symptoms, or even precede them. The abdomen is flat in these cases, not tender, and the child after a vomiting spell will lie at rest exhausted. In the ordinary cases seen with a cold the pains are spasmodic and colicy. The child will cry; however, these youngsters invariable say "their stomach hurts."

As to the cause of these types of pain Brennemann feels that the symptom is due to an expression of the inflammation in the abdominal lymph nodes. This does occur, as one knows

who has observed laparotomies where the only pathology found was swelling and redness of these mesenteric glands.

Beaven feels that because this susceptibility to pain decreases as age increases, it may be due to greater instability of the network of nerve plexuses in the intestinal wall.

Apfel recently stressed the importance of reviewing the nerve supply of the abdomen, especially as regards the acute abdominal condition in early childhood. The lower six intercostal nerves not only supply the pleura, but also the anterior and lateral portions of the abdominal wall with branches of the dorsal spinal nerves and the ilio-hypogastric and ilio-inguinal nerves. The posterior wall of the abdomen is supplied by lumbar and sacral spinal nerves. The lumbar, sacral and intercostal nerves are connected by sympathetic ganglia situated on each side of the spinal cord. The abdominal viscera receive their sensory nerve supply through sympathetic plexuses. These plexuses are connected with the cord centers supplying the abdominal wall.

The abdominal viscera are quite insensitive, but the parietal peritoneum being supplied with spinal nerves is very sensitive. It is generally accepted that the abdominal viscera are insensitive to pain, but are pain conscious when peristalsis becomes excessive or during inflammation when the tissues become engorged and tense, as a result of congestion. This congestion may often occur as a result of inflammation of the lymph nodes and hypertrophy of Peyer's patches with resulting hyper-peristalsis.

I am thoroughly convinced that no one explanation of these types of pain is completely satisfactory. As we said before, abdominal lymphadenopathy does occur and causes pain. One reads, also, of ruptured mesenteric glands, though I have never been fortunate enough to observe them.

The intestinal or abdominal musculature may share also in the general grippy pains observed so often in the seasonal influenza epidemics.

It seems to me that the greater number of cases coming to operation where the appendix does not show enough pathology to account for the symptoms that swollen glands have been more commonly found, and the less severe cases are explained on the basis of referred pain or myalgia of certain abdominal or perhaps intestinal musculature.

In the majority of children the navel is the landmark to which they will point in all forms of abdominal distress, but more frequently than we give them credit for they will lay their palms obliquely over McBurney's point where there is localized pathology in the appendix.

Having reviewed the mechanism of the pain, it remains then to differentiate between the medical and surgical abdomen; especially in so far as acute appendicitis is concerned.

The white count does not offer a great deal of assistance in differentiating the individual case. All surgeons agree that statistics prove that the white count is elevated in most cases of appendicitis. A surgeon rarely operates without ascertaining the blood count. However, in the isolated case the result of the count does not loom as an important factor. According to Friedman approximately fifty per cent. of the cases have a white count under 10,000 and in eleven per cent, of the perforated cases it is under 10,000. Aldhous laid great stress on the white count and he said that all doubtful cases with a leucocytosis of 15,000 to 30,000 should be explored; as for the differential count, the majority of men deem a polymorpho-nuclear leucocytosis of ninety per cent. indicates immediate operation and with the percentage below eighty watchful expectancy may be followed. There are, however, very toxic cases with extremely low white counts and low polymorpho-nuclear counts where waiting may be fatal.

Localized tenderness and spasm are the only distinctively diagnostic signs. These may be elicited by one who is familiar with handling children; who knows the cry, the reaction to examination, the wince and squirms of pain, and most of all the normal resistance of the abdominal muscles to palpation. A child may say its pain is improved or gone when a doctor arrives, but he cannot hide the localized tenderness and muscular defense when there is pathology present. In the "Medical" type of abdomen the most important factor is the pain which has a tendency to improve while the greatest factor in the alarming surgical cases is the greater tenderness and spasm, the pain being only an initial symptom as a rule. I do appreciate the fact that many times the physician is called late and has not

had sufficient time to observe the case from the onset and also that many errors may be made in the retro-cecal type which may not give localized symptoms.

I do not like the term chronic appendicitis and would rather use the term "recurrent" appendicitis in those cases of pain in the abdomen of locallized tenderness which subsides and there being no other signs of pathology such as an acute or chronic respiratory disorder, irregularity of diet, etc, as elicited from the history. I do not believe a surgeon is justified in exploring an abdomen because of intermittent attacks of abdominal pains in which other lesions far more common in early childhood have not been entirely ruled out. If there is a chronic appendicitis, why is it not always present.

Few surgeons will not modify their stand on chronic appendicitis. When questioned they will prefer the term "recurrent." Certainly we cannot speak of the lesion as being chronic in the same sense as chronic sinusitis or chronic osteomyelitis, etc.

In conclusion then, many types of common disorders in diet and hygiene or ordinary colds cause abdominal pain, and appendicitis does occur as a result of or during acute colds especially if enteritis is present.

The etiology is probably multiple inflamed glands or a referred type of pain or myalgia no one explanation of which fits all cases.

The diagnosis rests on localized tenderness which is persistent and with the tendency to be more severe and not upon the fleeting type of pain which is a very common complaint in children.

Chronic appendicitis does not occur in the same sense as chronic bronchitis, sinusitis, etc., but as definitely recurring attacks.

Early and frequent observation without too marked a tendency toward conservatism is essential.

BIBLIOGRAPHY

Brennemann: J. A. M. A., December 24, 1927, Volume 89, pp. 2183-2186.

Brennemann: Abdominal Pain of Throat Infections. Am. Journal Dis. Children. November, 1921, Volume 22, pp. 493-499.

Friedman: Forty-two Cases of Appendicitis Occurring During Epidemic of Upper Respiratory Tract Infections. Archives of Pediatrics. October, 1929. P. 604.

Aldhous: Brit. Med. Jour. 1914. Volume I. P. 240.

Apfel: Significance of Abdominal Pain in Light of Recent Studies. Archives of Pediatrics. January, 1930. P. 17.

Beaven: Significance of Abdominal Pain in Early Life. Archives of Pediatrics. April, 1929.

DISCUSSION

Dr. John R. Vonachen, Peoria: This is a broad subject to cover in twenty minutes, and I think Dr. Carey has very ably passed over the ground. There is probably no class of cases where the surgeon should take into consideration the ability of the internist, particularly the internist who is familiar with children, as in abdominal pain in children. Likewise, there is no class of cases in which observation at the bedside is of more importance. Experience at the bedside with this type of case goes a long way.

It is probably well in making a differential diagnosis of abdominal pain in children to consider the case from the standpoint of extra-peritoneal causes and intra-peritoneal causes. The extra-peritoneal causes divide themselves into those which cause pain in the abdominal wall and those causing pain in the thorax; spinal caries, omental hernia, umbilical hernia and types of acute hip disease are frequently conditions which cause pain in the abdominal wall.

The causes of pain in the thorax are pneumonia and as I had occasion to see in two cases, paricarditis which simulated an acute abdomen in the beginning. I think what is of value particularly from the standpoint of differential diagnosis between pneumonia and acute appendix, is in the majority of cases the leucocyte count. We know in the majority of cases of pneumonia before the chest symptoms develop, the count is high, not uncommonly over 30,000, which is rare in acute appendix. From the standpoint of intraperitoneal causes it would be well to divide these into two classes. Types with sudden onsets and those which are chronic or recurrent. Time will not permit this differentiation.

Dr. George E. Baxter, Chicago: I believe that every case of abdominal pain should be thought of as a potential appendix. If we do that we are not likely to make so many mistakes. If we keep that in mind we will be more careful in making our examinations, and I believe more cases are missed on account of examination not being made. It is a difficult thing to make a differential diagnosis. However, in every case of abdominal pain the important thing is to make sure whether there is an acute peritonitis or appendicitis infection. All during the course and subsequent to the course of colds, grippe, or upper respiratory tract infection there is always the possibility of involvement of the appendix. One word about the leucocyte count; I am strongly of the opinion that you should never make a diagnosis by the leucocyte count alone. It is of assistance in making your diagnosis, but that is all. We cannot differentiate pneumonia or appendicitis by the number of white cells present. Dr. Vonachen mentioned the fact that he gives great attention to the bedside examination. That should be emphasized. It is one of the most important factors in handling patients of this type.

Dr. A. H. Burr, Evanston: I think the point the essayist emphasized with regard to the relationship of tonsilitis to the appendix, and differentiating between them, with the symptoms that may arise from the tonsils and those which may arise in the appendix, is

most excellent. The tonsils play a large part in such conditions as enterocolitis with abdominal pain and bloody stools. The infected tonsil is very often the source of infection which brings about an acute condition of the appendix. I add that to the complications Dr. Carey mentioned.

Dr. John F. Carey, Joliet (closing): I was pleased to hear all the men agree that complete physical examination as well as closer cooperation between the internist and the surgeon are essential. The etiology of the pain produced by lumbar caries and the pathology in the chest is generally thought to be a referred type. Herniations of all types must be considered, especially those types which produce a tension on the peritoneum. I have often wondered, but generally disregard pain produced in umbilical hernia.

With regard to Dr. Arnold's suggestion of the structure of the appendix: The German writers, especially, speak of the appendix as the appendiceal tonsil. The similarity of structure of the tonsils and appendix would theoretically lead one to assume that bacteria that invade the tonsils would also find a receptive field in the lymphoid tissue of the appendix.

HISTOPATHOLOGY OF HOLES AT THE MACULA*

M. L. FOLK, M. D., F. A. C. S.
Associate in Ophthalmology, the University of Ill. College of Medicine. Associate attending Ophthalmologist, Michael Reese Hospital

CHICAGO.

While numerous clinical cases of holes at the macula have been reported since the first accurate description by Haab[1] and Kuhnt in 1900, histopathologic studies of this condition have been very few. Indeed, the writer in a fairly thorough though by no means complete review of the literature, has been able to find only twelve such instances; hence the report of the following additional case is amply justified.

L. K., female, aged 52 years, came to the eye clinic of the University of Illinois October 18, 1927, complaining of severe pain in the left eye which had been injured by a butcher knife when she was 3 years old, resulting in total blindness. The eye was inflamed for 6 months following the injury but finally quieted down and remained so until 7 years previous to admission. At that time it became extremely red and painful; the pain radiated to the left side of the face and scalp. Since then she has had similar attacks every winter, the present one being the severest and of several weeks' duration.

Examination revealed edema of the left upper lid, narrowing of the palpebral fissure, marked photophobia and lacrimation and considerable mixed injection. The cornea was steamy and ectatic and presented a 1.5 mm. wide grey crescentic scar, beginning 2 mm. from 1 o'clock and ending at 6 o'clock limbus. The iris appeared dull and was incarcerated in the lower part of the corneal wound, causing the pupil to be horizontally oval. The funudus reflex was absent, TT. + +, and there was no perception of light. The right eye was normal in every respect and the R. V. with +1.00 sphere=1.0+3; Schiötz tonometer R. 17.5, L. 59.5. The diagnosis was perforating wound, iridocyclitis, and secondary glaucoma.

Medicinal treatment failed to relieve the pain and enucleation was advised and consented to. Removal of the superior callote after proper fixation revealed a glaucomatous cupping of the disc and a 1 P. D. punched out round defect in the macular region. Forty serial sections were then prepared and studied in detail, especially the retina which showed extensive cystoid degeneration, numerous hemorrhages in the intergranular layer and a complete hole, 2 mm. in diameter in the macular region. In some sections the edges of the retinal gap were rounded off so that the layer of rods and cones was curled to one-half of the retinal thickness, while the external limiting membrane and the external granular layer were rolled all the way up to meet the ganglion cell layer. Other sections showed the nasal border to be free as above, while the temporal border fused with the choroid, a short distance away from the hole. There the outer nuclear layer ran into the choroid through the broken lamina basalis choroidea and there was migration of pigment into the plexiform layer. In the macular region, however, the choroid and pigment epithelium revealed no pathology. (Fig. 1.)

In addition to the above we found a low grade iridocyclitis, atrophy of the iris and ciliary body, incarceration of the iris in the corneal wound, traumatic cataract, and glaucomatous cupping of the disc. (Fig. 2.)

This case is unique in two respects: 1. Because it is the only one on record in which such a long time elapsed between the injury and the enucleation, namely 48 years; the longest case previously recorded is that by Coats,[2] 43 years after injury. 2. Because it is the second case on record in which the hole was complete, the only other one found in the literature is a case of retinal detachment due to sarcoma of the choroid, reported by E. Fuchs[3] in 1918. In the other eleven cases referred to above the hole was incomplete and usually found in the intergranular layers, the internal and external limiting membranes being visible. In V. Hippel's[4] case the outer granular layer was absent and the limitans interna was raised by the inner granular layer. In J. Murakami's[5] case, the defect was partial in the macula, but almost complete in the foveal region, as it communicated with the

*Read before Section on Eye, Ear, Nose and Throat, Illinois State Medical Meeting, May 20, 1930.

1. From the Department of Ophthalmology, the University of Illinois College of Medicine.

vitreous. However, even there, the limitans interna was present and grew over the hole.

It would not be amiss to review the ophthalmoscopic picture in this condition, although it is well known to the average ophthalmologist. It consists of a 1/3 to 1/2 P. D. sharply circumscribed usually circular dark red area in the macular region. It may be stippled, presenting yellowish spots in the center. The surrounding retina is edematous. According to Vogt[6] the hole at the macula can best be diagnosed with red free light, as with ordinary light a good many cases are either missed altogether or else cystic degeneration and a condition described by him as honeycombed macula are diagnosed as holes.

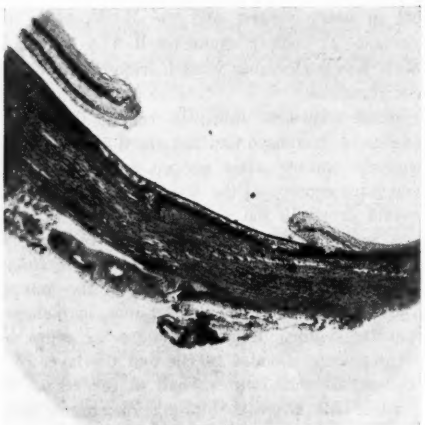


Fig. 1.

Complete Hole in Macular Region. All Layers Except Pigment Epithelium Have Disappeared.

As to the etiology Fuchs[7] enumerates the following factors:

1. Spontaneous inflammations of the eye, such as iridocyclitis, choroiditis, and albuminuric retinitis.
2. Contusion of the eyeball, the most frequent cause.
3. Disturbances of the retinal nutrition as in arteriosclerosis, retinitis pigmentosa, amaurotic family idiocy and exposure of the eye to x-rays.
4. Retinal detachment.
5. Perforation of the eye ball.
6. Unknown cause as senility.

Alt[8] adds another cause:

7. Intraocular tumors.

and Vogt[6] adds

8. Occlusion of central retinal vein.
9. Luetic neuroretinitis.
10. Idiocy and feeble-mindedness.

Haab obtained a history of trauma in nine out of twelve, and Reis in three out of four cases.

Vogt[6] offers the following differential points between the traumatic and so-called metacystic (one following cystoid degeneration) types:

1. History.
2. The presence of yellow shreds in the bottom of the hole in the latter and its absence in the former; though one may occasionally find some residue of yellow coloring in the neighborhood of the hole.
3. Honeycomb arrangement in the vicinity of the hole in the metacystic type, absent in the traumatic.
4. The metacystic holes tend to get smaller after a time, the traumatic remain constant for decades.
5. In the traumatic type the choroid and pigment epithelium are uninvolved; not so in the metacystic type.

Our case is evidently of traumatic origin if the differential points enumerated above are taken as a criterion.

Fig. 2.

Old Iridocyclitis, Cystic Degeneration of Retina, Secondary Glaucoma.

Regarding the pathogenesis, Fuchs[10] believes that the disease of the anterior segment is transmitted to the retina by way of the vitreous and that a mild inflammation may lead to edema and

exudation in the macular region on account of its delicate structure and vulnerability. The primary condition then is an edema, followed by absorption and cavitation. Reis[9] thinks the edema of the macular region is due to imbibition and transudation from the choroid on account of paralysis of its vessels. Ogilvie[11] maintains that the hole is due to counter coup concussion, his explanation being that the waves of disturbance traveling through the fluids of the eye meet at the posterior pole and affect the macula. Birch-Hershfield[12] agrees with Fuchs that it is an exudative process in connection with the changes in the blood vessels and finds support to this contention in the fact that the seat of the trouble is usually found in the inner granular layer where the capillary system is well developed. Most authorities seem to agree that it is a primary edema and secondary cavitation.

In conclusion, I am indebted to Dr. E. V. L. Brown of Chicago for his kind assistance in interpreting some of the peculiar pathologic findings in this case.

55 E. Washington St.

BIBLIOGRAPHY

1. Haab, O.: Zeitschr. f. Augenh. V. 3, p. 113, Kuhnt, ibid p. 106.
2. Coats, Geo.: Royal Lond. Oph. Hosp. Reports, 1907.
3. Fuchs, E.: Graef. Arch. f. Ophthalm. V. 97, p. 57.
4. E. Von Hippil: Graef. Arch. V. 64, p. 172.
5. Murakami, J.: Graef. Arch. f. Oph. V. 53, No. 3.
6. Vogt, A.: Graefe Saemisch Handb. 3rd Edit., V. 3.
7. Fuchs, E.: Graef. Arch. f. Oph. V. 79, p. 42.
8. Alt: Am. J. of Ophthal. V. 30, No. 4
9. Reis, W.: Zeitsch. f. Augenh. V. XV, p. 37.
10. Fuchs, E.: Zeitsch. f. Augenh. V. VI, p. 181.
11. Ogilvie, M.: Trans. Oph. Soc. Unit. Kingd. V. XX, p. 198.
12. Birch-Herschfeld: Graef. Arch. f. Oph. V. 59, No. 1.

DISCUSSION

Dr. R. C. Gamble, Chicago: Dr. Folk is to be congratulated upon his good fortune in obtaining this interesting eye for microscopic study and deserves the thanks of this section for the thorough manner in which he has presented the subject.

In reading the clinical records of patients with macular hole one is surprised to find that there is a great variation in the visual acuity of the affected eyes and a great variation in the completeness of the central scotoma; in fact, cases have been reported with 20/30 vision and no demonstrable central scotoma. Offhand, this would seem to be impossible. Dr. Folk has explained this quite satisfactorily by showing that in most cases more or less of the visual elements are present in the hole, enough perhaps to allow some degree of vision in that area. This is exactly the state of affairs to be expected if we realize that a macular hole usually develops from cystic formation rather than from a direct rupture at the time of the blow. These macular cysts have walls composed, of course, of retinal tissue, and even if the wall ruptures some of it will remain and there may be some function.

In the traumatic cases the course of events is thought to be as follows: First a reflex contraction of the arterioles and capillaries at the posterior pole of the eye due to the sudden transmission of force by contrecoup. This is followed by relaxation of the vessels which may permit transudation of fluid, especially in the inner granular layer. If this is extensive there results the typical picture of commotio retinae described by Berlin. If localized and small, cystic areas may develop in the macula and give rise to hole formation. The non-traumatic cases may arise by the effect of toxins of various sorts upon the vessels and produce the same result.

Most authorities state dogmatically that the hole never arises as a direct rupture at the time of injury. In Parson's Pathology of the Eye, the statement is made that no one ever saw a hole in less than sixty hours after the injury. During the past year I saw a man in whom a hole with fresh blood in and about it was seen within less than twenty-four hours after a definite injury to the eye. Of course, he may have had another blow upon the eye a few days previously, but he stated definitely that he had not. This, by the way, was an industrial case and it was much to his advantage to have had only one injury. It shows too how some of these more or less not practical subjects may suddenly become very practical, because this point of time duration was brought up in court.

Dr. Folk's slides illustrate another possible factor in the production of this condition. In some of the sections a short distance from the hole there is a place where the retina and choroid are fused together by connective tissue, the result of a previous inflammatory focus. The contraction of this connective tissue in the healing process may have caused traction upon the retina, which being naturally thin and probably cystic, at the macula, caused it to give way at this point, producing the hole.

(Slide.) I may be about to make a criticism and I want you all to understand that you cannot definitely decide some things on the lantern slide picture, not as well as you can on a section itself. It looks to me as though this is not actually a complete hole, because I think this single layer of pigment cells represents the layer of pigment epithelium of the retina so that we have only an absence of the inner nine layers. We still have left the epithelium which, histologically, should be regarded as retinal tissue, although we have a complete hole of the rest of the retina. This man was blind. This is the area to which I referred where there has been an inflammatory focus with connective tissue. The pigment epithelium of the retina is not present showing that some inflammation has extended through from the choroid to the retina.

Dr. O. B. Nugent, Chicago: The slide shows distinctly the pigmented epithelial layer of the retina; there-

fore, I would not consider this a complete hole. Further, the close adhesion of the choroid at the point where Dr. Gamble indicated as being an inflammatory process, appears to me as being a condition of an old hemorrhage at that point and the adherence of the retina having been affected after the absorption of the hemorrhagic process.

Dr. Leo Mayer, Chicago: I want to cite a case I saw of carbon monoxide poisoning. There was a hemorrhage in the macular area. The patient was told she had a very good chance of regaining perfectly normal vision. Much to our surprise, after about six weeks' time, the hemorrhage clearly up entirely, but it left a hole in the macula.

Dr. M. L. Folk (closing): I want to thank the gentlemen for their kind discussion.

Concerning the question raised by Dr. Gamble about this being an incomplete hole, I admit the pigment epithelium was present, but anatomically we consider it a part of the choroid; consequently, if all the layers are gone, although the pigment epithelium is left, we should consider it a complete hole. I think this answers that point.

In regard to the proliferation of connective tissue between the choroid and the retina, I do not think the hole was due to that. If you remember the points Vogt brought out in his differential diagnosis, this hole must be due to trauma. Vogt says if it is due to a metacystic condition, the hole disappears in due course of time. This hole existed for forty-seven years. The fact that it is a complete hole also would speak for a traumatic affair rather than a metacystic, for in metacystic hole we usually find the granular layers present.

A CASE OF BONE FORMATION IN THE CHOROID*

S. J. Meyer, M. D.
CHICAGO

Fuchs found reticular thickenings of the supra-choroid with membrane formation quite frequently in cases of atrophic eyes following severe traumatic inflammation. Besides definite, sharply demarcated membranes, he observed other changes, which indicated that mild, but long continued inflammation had been present, for example, after serous effusion of choroidal hemorrhage.

In all these callous formations the deposit of calcium salts may occur, and in most instances, also, the formation of bone. The latter also occurs in the choroid, lens, less often in the ciliary body and the posterior chamber and occasionally in the iris, as reported by Rollet.

The following case report is of especial interest in view of the fact that a presumable diagnosis of bone formation was made before enucleation of the eye in question:

In July, 1929, Miss Emma K., age 56, was first seen on account of a troublesome photophobia. She stated that fifteen years previously she had suffered from a retinal detachment in the right eye, which in spite of local treatment at that time, went on to complete blindness. The right eye upon examination revealed a marked enophthalmus without any appreciable decrease in size of the eyeball. The eye deviated about 20 degrees outward. There was no light perception. It was pale, but became slightly injected upon slight manipulation. There were several irregular, moderately sized, maculae on the cornea. The anterior chamber was entirely empty. The iris was darker brown than the left, atrophic, with nearly complete posterior synechia. The lens was completely opaque and calcified. No fundus reflex was present. The tension was plus three. Palpation of the eyeball gave a sensation of calcification.

The left eye revealed a moderate catarrhal conjunctivitis, which probably accounted for the patient's complaint of photophobia. The cornea and anterior chamber were normal. Retinoscopy under euphthalmin mydriasis revealed a myopia of -11.00 diopters, the correction of which improved the vision to 0.5. The tension was normal on palpation. The lens revealed incipient opacities. The vitreous was somewhat distorted. The fundus revealed a second degree conus and some myopic stretching involving the papillo-macular bundle.

The eye was enucleated under general anesthesia on the day following the first examination. X-ray pictures were immediately made of the enucleated eyeball, which revealed an almost complete ring-like opacity of calcification in the inner coat of the eye, and a marked calcification of the lens itself.

Unfortunately, the eye was not embedded in celloidin and then sectioned serially, but paraffin sections were made, and only certain parts sectioned.

The gross pathological picture presented a cornea which is dull and contains a few grayish-white maculae. The anterior chamber contained a small amount of clotted blood. The lens is apparently completely calcified. The iris is of

*Read before Section on Eye, Ear, Nose and Throat, Illinois State Medical Meeting, May 20, 1930.

firm consistency. The corpus vitreum similarly seems calcified.

Microscopic examination revealed a marked formation of new connective tissue which is most pronounced in the sclera and choroid and extends upward to the ciliary body. This newly formed connective tissue is richly infiltrated with lymphocytes and endothelial cells in some areas, in other areas it is very poor in nuclei and hyalinized. The lens and corpus vitreum reveal a markedly hyalinized connective tissue. In addition to these changes, the choroid and sclera reveal a large amount of new formation of bone structures with many Haversian canaliculi. Some areas show the bone formation replacing the corpus vitreum.

The bone formation develops according to the type of connective tissue ossification, without a previous cartilage phase. According to Pagenstecher, the young connective tissue cells on the margin of the connective tissue appearing in the calcified trabeculae play the role of osteoblasts, the bone grows by apposition. On the other hand, Poscharissky believes that the bone formation in the eyes (also in tumors of the stomach and the dura) develops in such a way that small calcified foci show a tendency to bone formation, that the bone then further develops until the entire surrounding area is involved. This author states that the following three factors are necessary to produce bone formation in any organ, viz:

1. Necrosis, or at least, marked calcium incrustation of the accompanying sclerosis.

2. Progressive drying up of the calcified masses, similar to amyloid formation.

3. Inclusion of the vascular containing granulation tissue in the region of the focus.

The structure of the bone may vary considerably. One may find single foci of compact bone substance or many trabeculae, which are formed in layers one over another, and are attached to one another by the formation of small bridges, or there may be larger masses, often with surrounding concentric layers and vessels. Lastly, there may be typical spongy bone substance with hollow spaces, which may be filled with vessels and adipose tissue.

The bone formation can be so marked that the larger part of the atrophic eyeball can be occupied by same, so that by an extenteration an almost complete bony wall can be removed, which has only posteriorly a small hole where the optic nerve enters, and a large hole anteriorly which may be partially closed by incomplete and irregular bridges. Microscopic examination of such a bony capsule reveals retinal rests, a usually calcified lens, an increase in the ciliary pigment epithelium, and often numerous large cyst formations in the choroid.

Isolated cases have been reported in which small areas of hyalin cartilage have been found in chronic uveitis. Sgrosso reported such a finding in a case of cyclitic thickening and newformed epichoroidal connective tissue in a markedly atrophic eyeball. Pes reported a case in a man 78 years old, in which an eye had been traumatized thirty-eight years previously (the eyeball was somewhat atrophic, an adherent leucoma was present accompanied by an aphakia and a retinal detachment). There was found a hyaline cartilage-like plate between the macula and papilla, proceeding temporarily from the latter. It appeared as a homogeneous substance, in the disseminated widely separated cells. In the peripheral part the "cartilage" is penetrated with fine blood vessels, which contain pigmented walls. He believed the starting point was the inflamed newly formed connective tissue in the deeper choroidal layers. There was no sign of calcification or bone formation. Michel reported a case as a "fibrochondroma" in which there was a stratification of the hyaline membrane or membrane of Bruch in the posterior pole in a 68-year-old woman (chronic uveitis with chorio-retinitis peripherica and precipitates). The choroidal stroma was free from inflammatory signs, on the vitreous was a fibrous tissue with round cells, connective tissue cells, pigment cells and cartilage cells.

Other cases of hyaline cartilage in detached and connective tissue degenerated retinae have been reported by Moaruro in an atrophic eyeball, by Seeligsohn in hydrophthalmus (chronic uveitis), especially, however, in malformed eyes (micro-phthalmus and anophthalmus congenitus) in the vitreous or in the embryonic connective tissue posterior to the lens.

The chief points to be noted about formation of bone in the choroid are:

(a) That as a rule it develops from the fibrous tissue, which in cases of plastic choroiditis re-

places the chorio-capillaris layer of the choroid, or in the fibrous tissue that has been formed on its inner side and has destroyed the lamina vitrea.

(b) It usually starts near the disc and may form a plaque in which there is a hole for the optic nerve fibers to pass through. Possibly the entrance of the short ciliary arteries into the eye in this region does have some connection with the increased exudation. Anteriorly it is usually limited by the ora serrata.

The bone may, however, be found in other parts of the choroid, in the retina, in the cyclitic membranes, in the lens, or replacing the vitreous. The larger bony areas show the structure of long bones with Haversian systems and, in rare cases, a true medulla of vascular adipose tissue.

(c) The bone is of the periosteal type. The osteoblasts appear either to originate from embryonic cells with a tendency to bone formation which persist in the choroid from fetal life, and are stimulated into growth by the long continued inflammation, forming first fibrous tissue and the bone. Or they may arise from connective tissue corpuscles which are converted into real bone corpuscles. This latter view seems more likely, for the cells of the fibrous tissue frequently are seen to take on an angular shape, and as they become more deeply embedded in the young ossified tissue are evidently converted into true bone corpuscles.

(d) It usually takes several years for bone to form in the choroid.

58 E. Washington St.

BIBLIOGRAPHY

Rollet: Révue gén. d'Ophthalm. 1908. P. 450.

Pes: Ueber einer Fall von Knorpelbildung in der Choroidea. Arch. f. Augenh. Bd. 48, S. 309. 1903.

Seeligsohn: Hydrophthalmus congenitas mit Knorpelbildung in Inneren de Auges. Arch. f. Augenh. Bd. 52. S. 32. 1905.

von Michels Yahrebericht, 1890. S. 160.

Sgrosso: Contribüto all' anatomia pathologica delli occhi atrofici, etc. Rif. Med., Napoli. Vol. 6, P. 848. 1890.

DISCUSSION

Dr. T. D. Allen, Chicago: Mr. Chairman, it is very profitable for us to listen to the pathological reports. They are to us what the necropsy is to the surgeon or general practitioner. They should stimulate us by advising us of our mistakes and of our correct diagnoses.

Unfortunately, there is a time element present in our specialty, caused by the necessity of preparing the specimens; during the preparation little can be learned. This lapse of time often causes us to lose interest.

We have been fortunate in having Dr. Meyer bring this interesting report to us and reawaken in us that desire we all have to be scientific. As knowledge of anatomy is the foundation, so knowledge of pathology is the framework on which we should build our practice. Too little, I fear, do we think in terms of pathology.

The finding of bone in pathological specimens is not at all unusual. The position and amount of bone have at times a clinical interest. Usually it is found in markedly shrunken globes and then in the posterior portion of the globe. Occasionally, however, it may occur in an eye of normal size, with plus tension.

Ernst Fuchs reports in Albrecht von Graefe's Archiv fuer Ophthalmologie, Vol. 68, p. 560, such a case. In brief, the history and findings were: Patient acquired a cataract in his first year of life. It was operated on at the age of 14 years. Twenty years later the eye was enucleated on account of pain. There was iris bombé and through the iris a yellow mass shone which was thought to be the lens. T. = +1. V. nil.

The iris was found very thin and atrophic; its periphery was applied to the cornea. Normal ciliary body. The anterior part of the eye was separated from the posterior by a thick membrane containing a scanty remnant of the retina and a neoplasm from the unpigmented epithelium of the flat part of the ciliary body. Immediately behind this was a thick bowl-shaped bony mass which lay upon the choroid and was apparently formed in an inflammatory exudate. The bone extended forward to the ciliary body, but it did not interfere with the function of the ciliary body, as the eye did not shrink, iris bombé was presented and the tension was above normal. The yellow mass was not lens but detached and degenerated retina. In this case the bony plate might have simulated increased tension.

We should have more pathological reports. Next to anatomy, pathology is the most important division of ophthalmology.

Dr. M. L. Folk, Chicago: I have enjoyed this paper very much. I believe there is only one thing that has not been emphasized sufficiently, although mentioned in a passing way, and that is the reason bone formation takes place in the choroid is because of its great vascularity. We know that bone formation is one of the last stages of degeneration. If the structure is not highly vascular we get calcareous degeneration, but if the structure is highly vascularized we get bone formation. That is the reason the choroid is usually the seat of bone formation in these eyes.

Dr. O. B. Nugent, Chicago: I recently sectioned an eye which had an almost complete bony involvement of choroid. This bone formation involved the ciliary processes and formed an almost complete ring around the ciliary body. Serial sections show most of the choroid to be involved and the bone formation is mostly in or near the chorio-capillaris layer.

This eye is exceedingly interesting because of the massive bone formation in the ciliary processes, as in most cases the bone formation is confined more to the choroid.

Dr. W. H. Wilder, Chicago: I think there is a practical aspect to this question and that is that you

will quite frequently find bone formations in the choroid in eyes which have been filled with exudate from previous inflammations. It is a good plan to test the tension of such eyes to see if it is increased.

I recall several such cases in which by palpation I was able to determine that there was something in the eyeball which was unusually hard and after enucleation bone formation was found in the choroid. Eyes that have developed bone in the choroid are apt to become irritable and possibly they may be exciters of sympathetic ophthalmia in the fellow eye. So it is well to consider this point in observation of old and shrunken eyes. They are not always very much shrunken, either, as Dr. Allen or someone has said, but they may be fairly good size and you should palpate them occasionally to see whether they feel unusually hard. If you have reason to suspect that there is ossification in the choroid, it is well to excise such an eye which may be a menace as well as being completely blind.

Dr. S. J. Meyer, Chicago (closing): There is not much to add to the discussion, except that I should like to say it is quite valuable to study your eyes histologically once you have them enucleated. The general pathologist at the hospital received this eye by mistake and sections were made before we knew anything about it, and the sections were poor. They should be sectioned in laboratories that confine themselves to eyes. You get better results, you can study them and you can learn more from your cases in that way.

THE SOLITARY CHOANAL POLYPUS*

S. M. Morwitz, S. B., M. D.

Associate Attending Otolaryngologist at the Mt. Sinai and Lutheran Deaconess Hospitals

CHICAGO

The occurrence of a solitary choanal polypus commands interest not alone from its size, location, and relative infrequency but from its etiologic and pathologic standpoint. Since the monumental work of Zuckerkandl on the normal and pathologic anatomy of the nasal sinuses the origin and mode of development of polypoid growths have caused much controversy.

Billroth in 1855 was the first to present the theory that the nasal polyp was nothing more than the normal mucous membrane of the nose which when stimulated by some irritant or trauma becomes edematous. He showed that the nasal polyp has the normal histologic structure of the nasal mucosa such as columnar epithelium, basal membrane, connective tissue framework and mucous glands. Zuckerkandl in 1892 first demonstrated that the mucosa of the middle and superior meati of the nose was very thin about the ostia of the accessory cavities and that the underlying connective tissue stroma was exceedingly delicate and loose. He contended that this form of membrane reacts readily to any trauma or irritation with a resultant edema and increase in volume.

The present classification of soft nasal tumors is chiefly based on the work of Zuckerkandl and Hajek. Both found that polyps and catarrhal inflammation of the antrum are identical processes. Hajek, moreover, pointed out that the loose areolar tissue of the mucoperiosteal layer of the normal accessory sinuses is in close connection with the hollow narrow spaces of the underlying bone and confirmed the findings of Cholewa, Woakes, and Cordes, that in certain cases the inflammatory process may extend from the surface to the periosteum and enter the open medullary spaces of the bone, producing a subacute osteomyelitis. Citelli, Robertson and A. O. Freedman recently presented specimens to prove that the nasal polyp is a gross ocular manifestation of an underlying chronic osteomyelitis or at least a periostitis of one or more of the accessory sinuses of the nose.

In 1905 Killian made the conjecture that a large number of choanal polypi came from the maxillary sinus by a thin pedicle. He assumed that the intra-maxillary polyp stem was dilated by cystic fluid and only on extraction collapsed to a thin stem by bursting of the cyst. He never opened an antrum in these cases. Brown-Kelly advocated that the choanal polyps were due to a cyst of the mucous membrane of the antrum first filling the whole cavity and then protruding through an accessory ostium. Uffenorde published a similar view. Grunwald and Hajek had previously noticed that during antrum irrigations polyps became expressed into the nose and these Killian believed were the initial stages of choanal polypi.

Ino Kubo in 1913 was the first to report the results of operative procedures on the antrum in cases of choanal polypi. He operated in 36 cases and found 27 cases originated in the maxillary sinus, 3 in the sphenoid sinus and 6 were of uncertain origin. He stated that they may occur on both sides simultaneously and that they sometimes recur. He agreed with Killian's idea that the formation of choanal polyps was promoted

*Read at the annual meeting of the Illinois Medical Society, Section on Ear, Nose, and Throat, at Joliet, May 20, 1930.

by sneezing. In 48 radical antrum operations performed by Mithoefer for removal of hyperplasias not associated with suppuration, solitary nasal and retronasal polypi were present 6 times and in every case the pedicle of the polyp had its origin within the antrum cavity. Hirsch opened the antrum in many cases of polypi and always found a high grade edema of the sinus mucosa. After the complete removal of the polyps all edematous swelling in the middle meatus disappeared, thus indicating that the origin of the polyps is not in the meatus but in the catarrhally involved antrum. Hirsch made a careful study of choanal polypi and concluded their mode of development as follows: The lumen of the antrum becomes filled by a well-marked edematous swelling of the mucosa which from pressure becomes incarcerated in the maxillary or accessory ostium. The peripheral part forms large choanal polyps as result of passive congestion and inflammation while the pedicle develops with cessation of the inflammation and shrinking of the mucous membrane of the antrum back to the bone wall. The thin strand comes from traction on the incarcerated tip. The section of mucosa on the floor of the antrum wherein lies the stalk of the choanal polyp cannot completely shrink and thus remains in a chronic and edematous state of inflammation.

With the discovery by Hopmann that the fluid in polyps contains largely albumin and not mucus, the choanal polyps are not true myxomas but fibromyxomas, inasmuch as the body of the tumor is made up of a network of fibrous tissue.

In a series of 878 cases of antral disease observed over a period of five years Syme found 26 cases or 3 per cent. of choanal polypi including cases of choanal polypi on both sides. Baum described in detail the gross and histological findings in two cases of large naso-pharyngeal polypi originating in the maxillary sinus which he operated on. In each case the antrum was filled by a cystic polyp and the attachment was on the nasal wall of the antrum just inside the ostium. Variable degrees of inflammation were discernible in the mucosa microscopically. Columnar epithelium changed to stratified squamous.

Syme reported two cases of antrochoanal polypi, one in a girl of 12 years, and exhibited a specimen of a sphenochoanal polypus the pedicle of which was traced to just on the inner side of edge of the sphenoidal ostium. Douglas Guthrie found choanal polypi in two children, a boy of 9 and a girl of 12. Banks Davis in 1908 showed a specimen of large pedunculated nasopharyngeal polypus from a boy of 9 and one from a boy of 8 years. James Donelan removed a large polypus with two pedicles from a man of 24.

Fig. 1
Lipiodol injected into the maxillary sinuses. The right antrum shows a filling defect near the nasal wall.

One pedicle appeared to come from the hiatus and the other posteriorly from an accessory ostium. Shiodasani writes of a Mohammedan male 45 years from whom a solitary choanal polyp weighing 8 oz. was removed under chloroform. The right side of the nose was considerably distended into almost globular shape; the right nasal cavity was completely obliterated and hanging behind the soft palate and uvula was a large rounded tumor. He sought relief only when he developed difficulty in swallowing and breathing. Dawson reports the removal of an antrochoanal polyp, weight 9½ drachms which filled the entire pharynx in a man 47 years who was content to endure its presence for years. He traced the pedicle lying underneath the middle

turbinate and on opening the canine fossa found polypoid degeneration of the lining membrane and the stalk close to the orifice of the cavity. Three sphenoidal cases were reported by Moure and Massee of Bordeaux and one by Irwin Moore of London. Jabson Horne reported a case of a large antrochoanal polypus but he did not open the antrum. Recently J. E. Lebensohn of Chicago told the writer of a young woman patient who came to his office with a history that she had a little bleeding from the throat and felt something slip down her throat which she spat out and showed him a large choanal polypus. A few weeks ago Edwin Blonder brought to the writer a specimen of a large solitary choanal polypus which he had removed from a young woman whose chief complaint was nasal twang of the voice. The last two cases cited found such relief after removal of the tumors that they refused to have anything further done.

The development of the solitary choanal polyp is so slow and gradual that no noteworthy symptoms arise until its size produces marked obstruction in the nasopharynx. Continued unilateral nasal stuffiness and nasal twang to the voice forces the patient to seek relief. Occasionally, hemorrhage, as in the writer's case, or the sensation of a lump in the throat on swallowing, bring to light the presence of this type of polypus.

The diagnosis of a solitary choanal polypus offers no difficulty if a careful examination by posterior rhinoscopy and palpation is made. Angiofibroma and papilloma which occur in the nasopharynx, arise from the pharyngeal wall and are firmly attached to it. The polyp has a characteristic consistency and appearance and is freely movable in the nasopharynx.

The treatment is surgical. If the pedicle can be seen in the nose then the severing of it with Van Struychen scissors will permit the polyp to be removed en masse through the mouth. The cold snare, blunt hook or Luc's forceps may be used. Snaring off the polyp will not cure the condition. It will ease the nasal breathing for a while but the polyp will recur because of the underlying condition. Therefore, a radical antrum operation is essential for a complete cure.

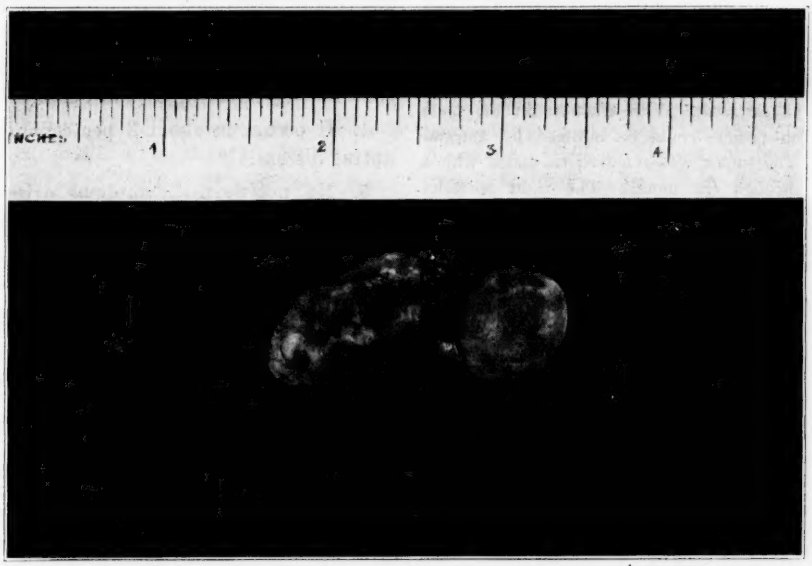


Fig. 2
Full size of choanal polypus removed through the mouth. Loose polypoid tissue attached to a flat thin pedicle removed through the nose not shown.

REPORT OF A CASE

Mr. A. C., aged 34 years, a salesman, consulted me, July 8, 1928, on account of stuffiness of the right side of the nose with frequent nose colds of many years duration. Examination revealed a marked deflection of the septum almost completely occluding the right nasal chamber. The right middle turbinate was compressed so that it could not be visualized. Transillumination gave a slight cloudiness of both antra and ethmoidal regions. A submucous resection of the septum was

advised and performed a week later. There was an uneventful postoperative course. The right middle turbinate was now seen to be flattened and had a glossy appearance suggesting an early polypoid degeneration; no polypi present. Good ventilation was now established in the right nasal half. He was not seen again until the morning of Dec. 30, 1929, when he reported at the hospital on account of bleeding from the throat and right side of the nose. He stated that he noticed a nasal twang to his voice and stuffiness of the nose but no particular distress until last evening when bleeding began from the nose and throat and continued intermittently during the night. Anterior rhinoscopy indicated obstructive breathing postnasally on the right side. On looking into the throat a mass was seen dangling below the level of the soft palate. Postnasal rhinoscopy showed the pharynx filled with a large tumor. On palpation the mass was soft, movable and not fixed to the pharyngeal wall. With traction on the mass postnasally no pedicle could be outlined by anterior rhinoscopy. The tumor was removed en masse with a cold snare through the mouth. The right posterior meatus was then found occluded by loose polypoid tissue attached to a flat thin pedicle which was traced underneath the middle turbinate to the right maxillary sinus. This section was removed with forceps and Van Struychen scissors, and sent to the laboratory for examination. The tumor was a typical fibromyxoma. Its length was 5 cms., width 1.6 cms., and weighed total 8.9 gms. The patient experienced relief in the nasal breathing. He was requested to report for study of the sinuses. He was not seen again until March 20, three months later. There were no polypi present in the nose. With transillumination the right antrum was dark and the left cloudy. Both inferior meati were cocanized and carefully swabbed with 10 percent. mercurochrome solution. With a Luer syringe 10 c. c. of normal salt solution was injected into each antrum and withdrawn by suction and the contents sent to the laboratory for a bacteriologic and cytologic examination. Both antra were next irrigated and 6 c. c. of lipiodol mixed with equal parts olive oil was slowly injected into each. Then after shrinking the nose posteriorly the sphenoid and posterior ethmoids were injected with lipiodal according to the Proetz technic and roentgenograms taken. The right antrum showed a definite filling defect suggesting polypoid growth near the nasal wall. The antral mucosa was not markedly thickened. The left antrum was negative. The posterior group of cells showed no definite findings. The laboratory report was as follows: Fluid from the right antrum contained staphlococci and pneumococci in smear and culture, also small lymphocytes and polymorphonuclear leucocytes indicating a subacute inflammatory condition of the sinus. That from the left antrum showed no bacteria on smear but staphlococci in culture, and few red cells as cellular content. The patient was advised to have a radical operation on the right antrum and has agreed to submit to such during his vacation period in July. From the study of the data in this case it appears quite evident that the origin of the solitary choanal polypus was in the right antrum which contains a mass of polypoid tissue and is in a state of subacute inflammation.

SUMMARY

1. The solitary choanal polyp is a sign of affection of the antrum even if the meatus appears clean. Occasionally it springs from the sphenoidal sinus.

2. This form of polyp with its pedicle results from an antral cyst becoming incarcerated in the maxillary or accessory ostium and develops as result of passive congestion and inflammation, and finally shrinkage of the mucus membrane of the antrum.

3. It is a fibromyxoma and its fluid content contains largely albumin and not mucus.

4. It occurs in about 3 per cent. of cases of antral disease.

5. No noteworthy symptoms arise until its size produces marked obstruction or bleeding.

6. The solitary choanal polypus may occur in children.

7. It is bound to recur because of the underlying pathologic condition.

8. A radical antrum operation is necessary for a complete cure.

REFERENCES

1. Zuckerkandl: Normale u. Pathologische anatomic der Nasenhohle (1882-1893).
2. Hajek, M.: Anatomy and Pathology of Sinuses, Eng. Edition, 1926.
3. Woakes: Lancet, July, 1885; Brit. M. J., 1892.
4. Hirsch, O.: Archives Otolargng., July, 1925. Laryngoscope, 37; 1. Jan. 1927. Bull. Battle Creek Hosp. Clinic, Mar. 1929.
5. Cholewa, Cliffenorde, Citelli, Cordes, quoted by O. Hirsch.
6. Kubo, Ino: Inter. Congr. of Med., London, 1913.
7. Mithofer: Laryngoscope, 36:2, Feb., 1926.
8. Robertson, G. A.: Kentucky, M. J., 25:454, Aug., 1927.
9. Shiodasaani: Indian Med. Gaz., 61:232, May, 1926.
10. Freedman, A. O.: Archiv. Otolaryng., 2:252, Sept., 1925.
11. Caboche, H.: Abs. J. A. M. A., 80:1183, April 21, 1923.
12. Dawson, G. W.: Lancet, 1:1095, June 3, 1922.
13. Syme, W. S.: Proc. Roy. Soc. Med. Lond., 1918-1919, p. 255.
14. Moore, I.: Obid, p. 208.
15. Brown-Kelly: Ibid, 1917-1918, p. 125.
16. Baum, H. L.: Laryngosc., 28:180, Mar., 1918.
17. Syme, W. S.: J. Laryng., Rhin. & Otol., 31: 515, Dec., 1916; J. Laryngol., 1919, p. 478.

55 E. Washington St.

DISCUSSION

Dr. A. H. Andrews, Chicago: I merely wish to say that I think there is some mistake about the removal of a choanal polyp weighing eight ounces. I removed a polypus from the nasopharynx and otopharynx weighing a little over one ounce, and I don't see how a polyp weighing eight ounces could find a place in the nose and

nasopharynx and the patient still live. My case was published in the Journal of Ophthamology and Oto-laryngology near twenty years ago. A colored woman came to the clinic with a mass in the throat, she also had a polyp extending out of the right nostril. Not knowing anything better to do I took hold of the polyp with forceps raising it out of the esophagus, then slipped a snare around it and by means of the snare and forceps pulled until it came away. The polyp I had seen in the front of the nose came out with the mass from the nasopharynx. Attached to the mass were pieces of cell-like bone which I took to be from the ethmoid cells. The patient got immediate relief and disappeared so I was unable to follow the case.

I seriously doubt the reliability of the report of an eight ounce polyp coming from the nose or nasopharynx.

Dr. S. Salinger, Chicago: It was a very excellent paper; I would rather be the writer of it than the discusser of it. There is no controverting the numerous facts, historical and histological, which Dr. Morwitz has brought out so carefully in his paper.

The only point on which I might find some disagreement is the question of the therapy. None of us, I believe. has had the opportunity of seeing more than a very few of these cases in a lifetime of practice; I know that I have not, although I have not lived my lifetime yet. I hope. The few that I have seen have gotten well by simply removing the choanal polyp and letting them go. I have had cases under observation for several years after without evidence of recurrence and the reason I believe spontaneous cure takes place in the antrum is that the edematous condition which exists there exists by reason of the complete occlusion in the nasopharynx interfering with ventilation. When you remove this you get complete nasal ventilation and this edematous condition existing in the antrum, which as Hirsch pointed out, is a chronic state (the retronasal polyp being the terminal condition of that state) usually subsides.

I should like to know whether it has been the experience of any of the men to see a choanal polyp recur under palliative therapy.

Dr. Miller, Terre Haute, Ind.: I should like to ask regarding the microscopic examinations. I just removed from a man's nose a mass which protruded from the left nares and also about an inch from the posterior choana. The report came back that the growth was malignant, but it was of the consistency of most polyps that we remove from the nose. I also opened the antrum as the pictures preceding the removal showed it to be dark, but all I found was a thickened membrane with some fluid in it. There is a question now of some further treatment for the man. I am interested to know whether possibly there could have been a mistake in the pathology.

Dr. S. M. Morwitz, Chicago: I want to thank you gentlemen for discussing this paper.

In answer to Dr. Salinger, of course, it is true that one does not see enough of these cases to be able to draw definite conclusion as to their recurrence when the polypus alone is removed. From what I gathered in the literature and from the findings of others who have operated on the antrum of these cases, there is such a definite involvement of the antral wall it appears evident that a recurrence is bound to occur. It would not be surprising if at times it does not occur. It is true that with the removal of the tumor there is removal of the pressure, consequently there is a release of tension on the stalk in the antrum and along with other conditions there is improvement in breathing. It is possible that with the improved ventilation the antrum may clear up and no recurrence occur.

In answer to Dr. Andrews I am not surprised that he asked that question because I was rather struck by that figure when I read it, but I believe I mentioned that it was removed under chloroform. This doctor speaks of a Mohammedan male who had this eight-ounce polyp. There was so much pressure in the nose from this tumor, such tremendous pressure, that it was impossible to do anything locally, so he was given chloroform. While being given chloroform the patient stopped breathing. They had to resuscitate him and then a second attempt was made under general anesthesia, and it was with great difficulty that the tumor was removed. I think there was some expert dissection done in order to remove it. I did not want to spend the time relating it. According to this author's report, the weight was eight ounces.

In reference to the microscopic findings in my case the laboratory report in this case was typical fibromyxoma. I intended to bring slides along, but on second thought I thought it might not be of sufficient interest or worthy enough because the sectional findings of the tissue were so typical of a fibromyxoma.

A NEW METHOD OF ANESTHESIA FOR THE ALLEVIATION OF PAIN OR INCISION OF A PERITONSILLAR ABSCESS*

M. REESE GUTTMAN, M. D.
CHICAGO

No comment is necessary regarding the urgent need of any procedure that affords relief to those so unfortunate as to be afflicted with a peritonsillar infection. This presentation, in addition to the preliminary article submitted for publication in the Archives of Oto-laryngology, is prompted by the enthusiastic reports of several colleagues who have utilized the method, in order that others may become acquainted with it. Peritonsillar abscess is familiar to all laryngologists. The marked distress of the patient and the decided difficulty encountered in the exam-

*Read before Section on Eye, Ear, Nose and Throat, Illinois State Medical Meeting, May 20, 1930.

ination of the throat and the subsequent incision, is uppermost in his mind. Any method whereby the patient can be so relieved of his pain that he will permit of examination or incision will undoubtedly be welcomed by the physician. If, in addition, this will permit him to tide his patient over the early stage of the infection, by affording relief from pain and permitting deglutition, until localization and liquefaction has occurred, it will help in avoiding the complications of too early surgery. The treatment, namely, incision, has not changed since the time of early Egyptian medicine, excepting, of course, the recent advocation of tonsillectomy by Baum and his followers.

As this paper deals with the control of pain in this affection, a resume of the nervous supply will not be superfluous. Practically speaking, peritonsillar infections almost always involve the supratonsillar area. Only rarely does the process involve the region between the pillars and the tonsil at the lower pole. The lower third of the tonsillar area receives its sensory supply from a plexiform arrangement of many small tonsillar branches of the glossopharyngeal nerve. The upper two-thirds of the tonsillar area and the contiguous soft palate receives its sensory supply from the middle and posterior palatine nerves. These nerves arise as two or three small branches of the maxillary division of the trigeminal nerve, in the region of the pterygopalatine fossa in which the sphenopalatine ganglion is located. These small branches are known as the sphenopalatine nerves, and they pass down through the ganglion, where they pick up a number of sympathetic fibers, and emerge from the ganglion to course downward through the pterygopalatine canal and appear at the lesser palatine foramen in the palatal bone. They are then distributed to the soft palate, the upper portions of the pillars and the upper part of the tonsil. Let it be stated at this time, in view of the recent anatomical and embryological study, that the sphenopalatine ganglion is not a sensory ganglion but a sympathetic one, and that the fibers from the sphenopalatine branches of the maxillary nerve merely course through the ganglion and are not nervously connected to it. From this rather brief description it can be seen that anesthesia of the upper portion of the tonsillar area can be effected by anesthetizing the middle and posterior palatine nerves.

Yankouer, Sonnenshein and others have popularized this by blocking the nerves as they emerge from the lesser palatine foramen, by the injection of procain just medial to the upper molar tooth. Furthermore, it can be seen that whenever one attempts to inject the sphenopalatine ganglion, he must of necessity at the same time anesthetize the palatine nerves, as they lie in intimate anatomical association. This is true whether one injects the ganglion, as it lies in the pterygopalatine fossa, via the nose, as advocated by Sluder or by means of the palate and pterygopalatine canal, as advocated by Ruskin.

It follows that, since practically all peritonsillar infections are located in the upper supratonsillar area, pain arising in and about this region may be effectively dealt with by cocainizing the palatine nerves, as they lie within the pterygopalatine fossa with the sphenopalatine ganglion. Although this method has been used by the writer since early in 1926, it must be stated that Hoople advocated this procedure in 1927 and that Gabriel has been using it also. The technique is simple.

A ten or twenty per cent. solution of cocaine or a two per cent. solution of Nupercane is applied by means of a cotton tipped applicator to the region of the sphenopalatine ganglion, namely, just behind and lateral to the posterior end of the middle turbinal. Stevenson has devised an extremely fine applicator for this purpose, one that can be easily insinuated about various obstructions and is so light that it will not fall out of the nose. We have found this applicator decidedly useful.

In a few minutes the patient will begin to experience relief from his pain. He will find it easy to open his mouth, and his ability to swallow will appear nothing short of miraculous to him. The throat may be examined without difficulty at this time and if necessary an incision may be made that is to all intents and purposes painless. Paralleling relief obtained by sphenopalatine cocainization in sphenopalatine neuralgia, success may be obtained in about 95 per cent. of the cases. In the remainder, due to the fact that ganglion and nerves may be situated in a deep lying fossa or in one that

has a thick layer of bone overlying it, the relief will not be secured, as the anesthetic cannot diffuse through to affect the nerve structures. In such cases one must resort to the use of a heavy Sluder needle and inject procaine into the fossa. We have not encountered such a case as yet, but the possibility must be borne in mind. To date twenty-seven cases of peritonsillar abscess have been afforded relief in this manner. In addition, one other case of painful tumor occupying the posterior pillar has been relieved of pain by this method. Several colleagues who have been using it have also experienced similar success, and it is hoped that others may have an opportunity in establishing its worth.

CONCLUSIONS

1. Peritonsillar infections most frequently occur in the upper portion of the tonsillar area.
2. This area receives its sensory nerve supply from the middle and posterior palatine nerves.
3. These nerves are intimately located, in the pterygopalatine fossa, with the sphenopalatine ganglion.
4. A method is described for anesthetizing these nerves in this location for the relief of pain in the peritonsillar abscess and effecting anesthesia for its incision.

185 N. Wabash Avenue.

DISCUSSION

Dr. C. K. Gabriel, Quincy: I wish to compliment Dr. Guttman on his excellent paper. I do not know of anything that I can add to what he has said, except that I have been using the method in about twenty cases and have obtained very good results in most of them.

I noticed that a short time after applying the cocaine to the ganglion the patients were able to open their mouths and could do it with less discomfort than they could before. Most of my cases have experienced a small amount of pain upon incising the tonsil, but I think it was much less than if nothing had been used at all. In one or two cases I have had the experience of not having any relief whatever from this application.

I have beeen using cocaine paste instead of the twenty per cent. solution of cocaine and adrenalin. One has to be extremely careful, of course, of causing intoxications. In order to do this, I use a very small amount of cotton, just a sufficient amount to absorb about one or two drops of the cocaine and apply this to the region of the posterior tip of the middle turbinal. Although this method may not be one hundred per cent. efficient in relieving the pain, I think it is a very definite help in these cases and I think it should be tried in all cases of peritonsillar abscess.

Dr. Walter Stevenson, Quincy: I am hardly prepared to discuss this very excellent paper. It is true as Dr. Beck has said that I am greatly interested in diseases of the maxillary antrum. I am greatly surprised to learn that Dr. Cavanaugh was unable to find but ten cases which appeared to be normal to x-ray after the antra had been injected with radiopaque substance. This, it seems to me, reflects greatly on the value of radiopaque x-ray study of the sinuses, because certainly we must have more normal sinuses than this would indicate.

It seems to me that before anyone can make a diagnosis of diseased sinuses that every feature of the case must be taken into consideration. By that I mean the history, the cytologic study of washings taken from sinuses, x-ray study without injection of radiopaque material, and also stereoscopic films. Recently we have been doing a great deal of cytologic study of antral washings, and have been very much impressed with the high percentage of cases which proved pathologic when the cytology indicates disease. It is only fair to say that our study of maxillary sinus disease indicates that radiopaque material injected into the sinus gives very definite information on a plate taken subsequently. This we have proved many times by operation and by examination of lining membrane microscopically.

One reason for the present pessimism in connection with sinus disease is the fact that a great many sinuses have been operated upon when in fact they were not the sinuses at fault. Careful study beforehand should give differential diagnoses, and it is my opinion that surgery gives brilliant results only when the sinus at fault is operated upon. Too many ethmoids have been operated on in the past, when as a matter of fact, the maxillary sinus was the real offender.

Dr. M. R. Guttman, Chicago: First, I want to thank Dr. Gabriel for his very kind discussion of my paper. In regard to Dr. Stevenson's question, if I gather this correctly, he means injection into the palate, opposite the molar tooth. Unfortunately, the site of predilection for the injection is also the site of the inflammation. Whenever we have a peritonsillar abscess it practically always involves the supratonsillar area in the palate just where the nerves emerge, and one would hesitate to inject anything within an inflamed area.

OPTIC NEURITIS ETIOLOGY AND TREATMENT*

MEYER WIENER, M. D.
ST. LOUIS, MO.

Since it is almost impossible to separate optic neuritis from papilledema, particularly in the early stages, the two conditions are generally discussed under one head. I shall therefore consider under this title any acquired swelling or

*Read before Section on Eye, Ear, Nose and Throat, Illinois College of Medicine.

inflammation of the nerve, whether it be due to pressure or toxemia.

Papilledema, in the most important group of cases, where the disc changes are an indication of increased intra-cranial pressure, is due to an edema of the nerve head which has a physical basis. The pathology of the condition has been thoroughly worked out by Gordon Holmes[1] and others. The swelling of the disc is due almost entirely to infiltration of its tissues and the anterior layers of the lamina cribrosa. As early as 1869, Schwalbe showed that the subvaginal space around the optic nerve is continuous with, and can be injected from the subdural space, and pointed out the significance of this fact in choked disc. As the disc swells it displaces the retina laterally, sometimes throwing it into folds concentric with the disc margin. The axial fibers become raised to fill up the physiological cup, which is further filled in by the collection of fluids under the internal limiting membrane. The remaining layers of the retina show little or no change, there being only a slight edema in the immediate vicinity of the disc. The veins and capillaries are markedly distended, with hemorrhages on and immediately surrounding the disc. There is little if any evidence of inflammatory process, the few changes present being attributed to degenerative and destructive processes going on in the nerve. In cases of long standing new blood vessels form on the surface of the disc. As the papilledema subsides, the disc shrinks, there is a diminution of the nerve fibers and a proliferation of the neuroglial nuclei and fibers, with an increase of the fibrous tissue which surrounds the vessels. Sometimes a series of fine white dots seen radiating out from the macula similar to that seen in renal retinitis, but usually involving only the side toward the disc. Until the degeneration changes take place the vision as well as the visual fields may remain normal except for enlargement of the blind spot. The degree of swelling or protrusion of the disc can be judged by the way the vessels bend over its edges and by the difference in refraction between the top of the disc and the surrounding retina. This does not give the full amount of swelling owing to a slight edema of the retina. In cases where opacities of the cornea or lens will not permit of direct examination, the parallectic displacement of the disc with reference to the retina can be estimated with the indirect method. Uhthoff[3] gives the following table of the causes of papilledema:

	Per cent.
Brain tumor	71.
Cerebral Syphilis	12.
Brain tuberculoma	3.6
Brain abscess	2.2
Oxycephaly	2.2
Tuberculous meningitis	1.1
Nephritis	1.1
Lead poisoning	0.3

About two-thirds of the cases of brain tumor show papilledema, depending on the location of the growth. Practically all tumors involving the cerebellum, fourth ventricle and temporo-sphenoidal region are associated with choked disc. Papilledema is less frequent in tumors of the cortical and subcortical areas and the pons.

It is a rare occurrence in cases of cerebral or intracranial hemorrhage or brain softening. You will notice that I have not touched on sinus disease as a cause of papilledema. While many authorities have been of the opinion that sinus infection may produce choked disc, the majority of present day neuro-surgeons do not concede this, but consider them to be cases of optic neuritis with an associated edema.

On the treatment of papilledema due to tumor there is practically no divergence of opinion as to the necessity of relieving the intracranial pressure as soon as possible. The ideal procedure of course is to remove the cause. In case the tumor cannot be localized, a decompression should be made in order to save the sight. The diagnosis is sometimes confusing owing to unusual complications. I recently saw a case in consultation where there was a tremendous choked disc in the right eye with swelling of lesser degree in the left eye, plus a complete flat detachment of the retina with extensive retinal exudates in the region of the disc. This case was not suspected of being due to brain tumor for a long time on account of the confusion due to the complication in the left eye. On the other hand, I was asked to see a child in the children's hospital who had been sent in for immediate operation, with a diagnosis of choked disc and brain tumor. This child had a most unusual fundus condition. The discs were slightly swollen with extensive edema of the retina immediately surrounding and enormous preretinal hemorrhage in both eyes which I took to be of toxic origin. Extensive laboratory and other tests failed to reveal the cause of the child's eye

condition or accompanying delirium. The neuritis and hemorrhages have subsided and the child is apparently well, without having had any treatment. The swelling of the disc may be very slight and transitory. About two years ago I examined a young girl whose headaches had not been relieved by several changes in her glasses. I found a suspicion of swelling of the upper nasal border of the discs, which was not constant on successive examinations. The fields showed only a slight indent, but this was constant. A diagnosis of brain tumor was suspected. She eventually was operated upon by Cushing who found an angioma which he was not able to remove. A muscle pack was used. Her condition seems to be improving.

Until the work of Walter Parker[4] was published, there was much controversy as to whether the eye showing the greatest amount of swelling had any significance in determining the side on which the tumor was located. He proved, both with experiments on animals and observation on man, that the difference in the amount of swelling in the two eyes was dependent on the variation in intra-ocular pressure, the eye showing the lower tension always revealing the higher degree of swelling.

True inflammation of the optic nerve or optic neuritis, as distinguished from edema of the nerve due to increased intracranial pressure, may be divided into

1. Intra-ocular.
2. Retrobulbar.

Intra-ocular optic neuritis is seldom seen without some inflammatory involvement of the surrounding retina or choroid. Whereas the color of the nerve head in papilledema is even paler than normal, the redness is increased in inflammation of the nerve. Except where the inflammation is secondary to retinal or choroidal involvement, the redness is general and evenly distributed. The veins are generally enlarged and tortuous and the arteries smaller. The causes of optic neuritis are many. Ethmoid and sphenoid disease, orbital inflammation, injuries, tumors, erysipelas, meningitis, aneurisms, familial heredity, acute febrile diseases, anemia, chlorosis, diabetes, malaria. syphilis, lead poisoning, leucocythemia, pyemia, focal infection, etc.

Sinus diesase is one of the most frequent offenders and may produce either intraocular or retrobulbar neuritis. In the opinion of Sluder, it is not necessary to have pus, but the nerve may be affected in hyperplastic sinusitis. I can vouch personally for the truth of this statement. A few years ago a young girl consulted me on account of a blur over the left eye. The fundus appeared normal, the vision was 20/20—. The peripheral field showed no contraction. There was slight enlargement of the left blind spot. Her nose and sinuses were examined by a most competent specialist without positive findings. She became progressively worse. She was sent to the hospital for a general physical work up, including an exhaustive neurological examination, with negative results. The pupil became dilated and fixed, with bare light perception and finally no perception for light. On account of the history of the condition having come on following a cold, in the face of negative rhinological and all other physical findings, I insisted on having her ethmoid and sphenoid sinuses opened. No pus or secretion was found. The patient immediately began to improve and improvement continued. Although her disc is quite white, her vision in the left eye is 20/25 with an almost normal field.

I could report case after case where no secretion was found in the nose in which optic neuritis or retrobulbar neuritis subsided with shrinking of the mucous membranes of the nose. The visual acuity improves, the scotoma gets smaller or disappears and the symptoms of blur are dissipated.

I can recall one case where I was called in to see a patient who had become suddenly blind. The pupils were widely dilated and barely reacted to light. The fundus revealed nothing abnormal. A rhinologist was summoned to examine the nose. After shrinking the nasal mucosa to complete his examination the patient's sight began to return, and by morning was almost completely restored. No suggestive therapeutics were employed in this case as the dramatic result was as much a surprise to us as to the patient.

Optic neuritis resulting from meningitis from any cause is not infrequent. It may produce optic neuritis with or without ophthalmoscopic change. Sometimes blindness may supervene and vision restored more or less completely with no ophthalmoscopic change whatsoever. This

may be explained by a diffuse perineuritis extending the whole length of the optic tracts. Retrobulbar tumors or orbital abscess may give rise to optic neuritis, which may or may not manifest itself by blurring of the margins and swelling and redness of the discs.

Optic neuritis is usually found in acute myelitis.

Optic nerve changes may occur in syphilis in the entire absence of any discoverable evidence of intra-cranial involvement, either at the time or subsequently. It is not at all unusual to find optic neuritis or papilledema or optic nerve atrophy secondary to it, the result of gumma.

Klopfer[5] has collected 214 cases of hereditary optic neuritis. Most of which were found in males. The ages ran from 10 to 40. Dr. Hedwig Kuhn has related a most interesting case of Leber's disease in which there was a retrobulbar neuritis with typical familial history, where pathological condition of the arachnoid with adhesions was found on operation. Rapid improvement in vision and fields followed the operation.

Colloid excrescences and hyaline bodies are sometimes seen on the papilla and may easily be confused with acute process in cases under suspicion. They appear as small rounded elevations, yellowish gray in color and often protruding beyond the margin of the disc. They may occur at any age, may accompany retinitis choroiditis or optic nerve atrophy or they may appear in otherwise perfectly healthy eyes with normal vision.

We also know that optic neuritis may occur in sympathetic ophthalmia. Beard[6] has described a case of pseudo-choked disc where there was swelling of 8 diopters, no lardaceous enlargement of the papilla; aside from their tortuosity, no change in the appearance of the trunks of the retinal veins, no reduction in the peripheral fields, no enlargement of the blind spots, visibility of the optic nerve fibers not enhanced, and absence of any associated symptoms such as intermittent severe headaches, sudden vomiting, vertigo, cramps, etc. Loring and Graefe attribute the indistinctness of the borders of the disc in these cases to a superabundance of connective tissue at the papilla.

Retrobulbar neuritis from any toxic condition or the so-called toxic amblyopias are believed by many to be due to primary involvement of the ganglion cells of the retina rather than the fibers of the optic nerve itself.

Under this head must be the exogenic poisons such as tobacco, alcohol, lead, arsenic and others as well as those toxins produced within the body, as in diabetes, beri-beri and neuritis peripherica gravidorum. Here we generally find central scotoma without peripheral involvement.

In another group consisting of quinine, salicylic acid and felix mas, changes are noticed in the form of peripheral and general depression of the fields.

Changes in chemical construction of drugs may alter their effect on the fields of vision. Thus, while quinine produces a contraction of the peripheral fields and central scotoma is rare, the reverse is true of ethyl hydrocuprein hydrochloride.

The same may be said of some of the arsenic compounds. While organic arsenical compounds rarely produce field changes, which consist of central scotomata when they do, organic compounds such as soamin, atoxyl, etc., manifest a high toxicity for the optic nerve and produce peripheral contraction resembling quinine and rarely scotomata. Igersheimer[7] in a review of 37 cases of soamin poisoning found restriction of the nasal field in all those cases where the field had been taken and not a scotoma in a single one. These individual cases may be held up as a few of many examples of how very important it is to take, and carefully record, the visual fields. The perimeter, while invaluable, is insufficient, and a campimeter or tangent screen is absolutely essential for an accurate diagnosis in many cases.

Optic neuritis or papilledema is not a case for the ophthalmologist to treat. He is the one on whom the responsibility lies to determine the cause and observe and direct the case until the cause is found and removed.

308 N. 6th St.

REFERENCES

1. Gordon, Holmes, Brain, 1911, xxxiii, 389.
2. Schwalbe; cpl. of Med., Wiss., 1869, p. 465.
3. Bowman Lecture, Trans. Ophth. Soc. N. K., 1914, xxiv, 51.
4. Annals of Ophth., Oct., 1911.
5. Inaug. Dissert., Tuebingen, 1898.
6. Semiology and Diagnosis, p. 217.
7. Igersheimer. Ueber die wirkung des Atoxyls auf das Auge. Arch. f. Oph., Bd. 71, S. 379, 1909.

MEDICINE AND THE EYE

LEO L. MAYER, B. S., M. D.
Assistant in Clinic Ophthalmology, Northwestern University; —Clinical Assistant, Mandel Clinic; Adjunct, Michael Reese Hospital.
CHICAGO

It is the purpose of this paper to bring to the attention of the general practitioner and the internist especially, also to the specialist in more remote branches of medicine, first, a resume of the care of diseased and abnormal conditions of the eye; secondly, an outline to show how the eye physician and his colleagues in other branches of medicine may work together for the betterment of medicine and the patient, and also a clearer understanding of ocular problems, and thirdly, to attempt, in a measure, to relieve that feeling which places the subject of opthalmology in an isolated field, which not only makes the medical man profess ignorance but indeed takes away all his desire to learn anything concerning the eye.

So often the phrase, "Oh! I don't know anything about the eye," is heard, and it occurred to me that repeated outlines concerning the eye brought to the great "unknowing" would not only familiarize them with the subject but on the other hand would actually instill a desire to learn more about it, whereas the laborious task of wading through a voluminous text-book might prove too great a task.

Intricate procedures must be left to the specialist in his respective calling but immediate and emergency care are economies both to patient, doctor, and specialist.

Eyebrows. Congenital absence and loss of eyebrows occur rarely. Remedies consist in transplantation of hairy skin from another part of the body, or an easier and usually satisfactory artificial reconstruction by so-called "beauty experts" gives excellent results especially when such manipulation is supervised by the physician. Premature gray hairs in the brows is thought to be due to an endocrine disturbance, but therapy is not at all satisfactory.

Malformations yield to plastic surgery.

Lids and Lashes. Congenital lid drops (ptosis) or even if it occurs after birth is readily amenable to surgery and in the proper hands unchallengable results are obtained.

At times the lashes fall out due to no demonstrable cause, but this is rare. An inflammation of the hair follicles (blephlaritis marginalis) may be treated with 1 percent. yellow oxide of mercury ointment. Loss of lashes due to trachoma where it is necessary to epilate the inturning lashes which infringe upon the eyeball calls for plastic operation to evert the lids.

Infections such as styes or infected cysts (chalazia) are treated as any skin infection although it is sometimes necessary to evaculate the cyst and curette it to prevent recurrence. There is some reason to believe that such infections are predisposed by errors of refraction and this should be checked. A dilute solution of sulfuric acid given in doses of thirty drops three times a day orally may be used as in the case of boils, etc.

Lacrymal Apparatus. Cysts and tumors of the lacrymal gland are occasional and require surgical interference or use of x-ray and radium. Excessive tearing is a complaint often heard. At times the patient exaggerates the discomfort of the condition. In winter weather overflow of tears is more or less a natural phenomenon. However, conditions which cause closure of the lacrymal canal are found and are best relieved by finding the cause. Congenital absence of the puncta, infections in the sac, obstruction to the exit of the canal in the nose or a poor approximation of the punctum to the bulbar conjunctiva may be the etiological factor. Mild infections or temporary stoppage may be overcome by use of an astringent antiseptic such as neosilvol or optochin hydrochloride in 1 percent. solution used four to five times a day. Probing, extripation of the sac, and intra-nasal operative procedures must be left for the oculist in connection with his rhinological colleague. Operative results give a fair amount of relief but cannot be guaranteed.

Conjunctiva and Cornea. Foreign bodies in the conjunctival sac, under the the upper lid and on the cornea are so frequent that it behooves every physician to understand methods for eradicating this extremely irritating source of discomfort. Failure of removal may result in loss of sleep and rest, abrasion of the cornea, infection of the cornea with ulcer formation and finally scarring with diminution of vision. The upper lid must be entirely everted and a good well focused light used to examine all exposed

parts. A 2 per cent. Butyn solution instilled four to five times at intervals of two to three minutes gives excellent anesthesia and is harmless. If the foreign body lies lightly on the surface it may be brushed off with a dampened cotton applicator. If imbedded in the tissue infinite care in the use of an instrument for removal is pre-requisite and antiseptic precaution to prevent infection is very important.

A great many conditions called "red eyes" (acute conjunctivitis) are self limiting infections and get well in spite of treatment, although more rapid improvement is noted with *proper* care. Most of these infections are contagious and therein is the importance of early treatment.

Differential diagnosis between a simple acute conjunctivitis, an iritis, a beginning interstitial keratitis, an acute glaucoma or a purulent conjunctivitis due to the gonococcus makes the initial recognition of what may be the incipiency of the serious disease of such vital importance to the patient, and rather than give the patient the usual druggists' prescription of "wash your eyes with boric acid," it is far safer to give the patient a mild astringent such as ½ percent. zinc sulphate and watch them carefully for forty-eight hours. Argyrol and protargol have almost made themselves synonymous with "red eyes," however it has been scientifically proven that other antiseptics such as mercurochrome, optochin, hexylresorcinal, etc., are much more efficacious and there is no danger of argyrosis.

General conditions of malnutrition, anaphylaxis, infective processes in other parts of the body together with disease entities play their role in conjunctival infections and must not be overlooked.

External Ocular Muscles. Under this heading are included the squints or crossed and "wall" eyed, the diplopias (seeing double) and other muscle defects due to paralysis, congenital anomalies, etc. The majority of these conditions are naturally taken care of by an eye physician, but I feel that in a paper such as this many points of importance may be brought to the attention of those especially who take care of children, and thus give them a better foundation on which to answer the inquiring parents. The consensus of opinion is that all children with crossed eyes should be refracted and given glasses, if needed, as early as possible after the condition is definitely established. Children do not "outgrow" such a condition. Operation is indicated as early as possible when it is determined that glasses or exercises have failed, this so as to enhance the chances for use of both eyes together, that is, the education of the fusion center which is only amenable to training during the first six to eight years of life. Operation may be only partial, and further operative procedure may be indicated, but it is believed that with proper technique a satisfactory cosmetic result is not only possible but most probable. The anticipation of loss of sight of an eye should be disregarded and the patient's or parents' fears should be allayed because of the rarity of any untoward results.

Seeing double and demonstrable single or multiple muscle paralyses are indicative of general disorder, unless due to local trauma, and investigation as to cause must be persistent and thorough.

Muscle operations are for the most part the least dangerous, easiest and most satisfactory of operative ophthalmology, and for anyone in these times to present himself to his fellow men with stigmata or physical defect, the most noticeable of human defects, is indeed an imposition on our intelligence.

Bulbar Conditions. This title is used because it is desired to group all those disease processes or anomalies which are not entirely apparent to the unaided examinig eye of the physician. It is true that the iris for the most part is easily examined from the exterior, but, aside, from its reaction to light and accommodation, its further investigation remains for the ophthalmologist.

Perhaps the most outstanding change in the bulb is its protrusion or regression in the socket. This is always more noticeable when only one eye is affected. One must be sure of the condition and discount those apparent cases due to a widened or narrowed palpebral fissure. Such cases may be due to intra-ocular tumors, retra-orbital growths, sinus affections, brain lesions and goitre. Determination of the cause will indicate the treatment.

Every physician should have an ophthalmoscope and use it in the examination of every patient just as he used the stethoscope or the tongue depressor. Constant and persistent use

will enable the physician to learn the normal fundus and thus any departure from the normal will be easily noted. The fundus of the eye is the only place in the body where blood vessels are brought to the surface so that they may be studied in reference to the condition of other vessels in various parts of the system. It is true that most intra-globular lesions call for the investigation of the ophthalmologist but the early recognition of these is not often a prize to be sought for by the internist, thereby aiding in that most desirable factor in all medical investigation—the recognition of disease at its incipiency.

If the patient consults the practitioner because of failing vision a usual answer is, especially to the individual over sixty years, "Oh, well, that is cataract and you have to wait until it gets ripe." If there is one point which I want to bring home it is the habit of always considering such a complaint as due to glaucoma (hardening of the eyeball) and not to cataract or any other easily treated affection. More eyes are lost due to this one attitude than can be imagined. Whereas the cataract has no deleterious effect on the entire mechanism of the eye except for its action of making one see through a cloud which cloud may be easily removed, that insidious increase in the firmness of the eyeball pressing on the delicate fibers of the optic nerve kills them and function will never return in dead tissue.

Acute glaucoma with the concomitant symptoms of nausea, headache, and vomiting which often accompany it, is frequently lost sight of in the rush to relieve the patient's stomach. It is a matter of a few seconds to note the redness of an eye and to palpate the closed lids for any evidence of difference in firmness of the eyeballs.

Accidents. Accidental instillation of irritating fluids, powders or other substances into the exposed conjunctival sac call for the simple emergency expedient of putting the patient's head under a faucet, holding the lids apart and douching the eye well with a running stream of water. Neutralization of acids or alkalis may be done later or a mild oil such as olive oil, which is always handy, allays irritation.

Penetrating wounds or concussion shocks call for the application of a splint just as in other breaks of the body continuity. Atropine 1% dilates the pupil, puts it at rest and eases the pain which occurs with an iris reacting to light. Where a suspicion or symptom of glaucoma prevails atropine is contra-indicated. As in other surgery replacement of portions of the eye, suturing and repair must be done under aseptic surroundings.

In industries suitable protective non-shatterable glasses should be provided. It is also of interest to note here that the late Dr. Harold Gifford made the statement that in thirty years experience of some two thousand serious accidental injuries to the eye, in only three was the cause due to broken spectacles and none of these were very serious.

Refraction. To give the general medical attendant an insight into this often misunderstood subject which is the most mysterious of all the mysteries of the eye to the "unknowing," it behooves one to enumerate some dogmatic, definite statements which are the general consensus of opinion of those greatly experienced in refraction.

In generalizing it may be said that normally the shape of the eye causes parallel rays of light to be focused on the retina when the media, such as cornea, aqueous, lens and vitreous are normal. For purely physical reasons, if the eye is longer than normal (myopic) the rays focus in front of the retina and a diverging or concave lens is necessary to correct this, and conversely if the eye is shorter than normal (hypermetropia) the rays focus back of the retina and hence a converging or convex lens is necessary for the correction. If for any reason there is a distortion of the normal curvature of any of the refracting media (cornea, lens, etc.) in one or even more of the meridians (astigmatism) then mixtures of concave and convex lenses may be necessary for correction. The majority of eyes have a permanent length which does not change during life, after the individual has reached the age of stability, which age has a rather elastic range. The most outstanding exception to the rule is that individual whose eyes become progressively more myopic (nearsighted) due to hereditary tendencies, close application or other

causes not definitely decided upon at the present writing.

Young individuals because of the greater elasticity of their muscles are able to accommodate for all or some portion of their refractive error due to the fact that the ciliary muscle causes a change in the refractive power of the lens. Naturally to be certain of just what error of refraction exists in the eyes of these individuals, it is necessary to paralyze this accommodation and that is the reason for the use of drops (cycoplegics) such as atropine, homatropine, euphthalmine and hyoscin.

The ability to use the ciliary muscle or better the overuse of it causes symptoms of headache, malaise, unrest, and discomfort just as in fatigue of any muscle and therefore the necessity of glasses to aid this muscle.

Close work (less than 6 meters or 20 feet) puts more strain on this accommodation process hence it is felt that where progressive myopia is found limitation of reading, sewing and the like are of benefit.

The ability to read the line marked 20 at a distance of 20 feet with each eye separately is indicative of normal vision. However, even though the patient has normal vision beware that accommodation does not play a part in its production. On the other hand, there must be a cause for defective vision in every eye which does not accomplish the normal and this cause must be sought and recorded.

All eye examinations are based on vision and any discrepancy from the normal, causes too numerous to mention, calls for thorough investigation.

Illumination. The avoidance of glare whether thrown directly into the eye or reflected from some glazed surface such as a book or desk is conducive to good vision. Illuminating engineers have constructed the modern building and arranged the lights so that there is no directing of rays into the eye.

Reading while reclining does not injure the eyes if the light comes from behind or to the side of the head. Dim lights, glare and direct light in the eyes are to be avoided.

General Consideration. So far I have endeavored in a meager outline to cover ordinary and outstanding affections of the eye.

The use and practice with the handy electric ophthalmoscope in the hands of general medical men will go far in discovering incipiency of eye diseases and what is of more import will enable him to see changes in the fundus which are indicative of general disease. Such conditions as arteriosclerosis, albuminuria, diabetes, anemia, syphilis, tuberculosis, brain lesions, local infections and general infections together with other diseased conditions often show first by changes in the "eye grounds" and warn of what is to come.

Recently a patient was referred to me by an optician who discovered that he was unable to give the patient normal vision. This patient was being treated by a high grade and professionally recognized internist for diabetes. When the young man complained to his physician concerning poor vision, the answer was, "Oh, go to — — (an optical house) and see if you need glasses." The patient had a beginning diabetic retinitis which cleared up after a recheck of diet and insulin. I cite this case in order that you may recognize the incompetency of the optician, the lackness of the physician and the danger to the patient. Remarkable results have been obtained in the past ten years with the telescopic or "Distal" lenses in eyes which have lost some of their sight, that cause the layman to consider the individual blind. Ophthalmology is each day becoming closely linked with general medical problems, with laboratory research and closer affiliation in the problems due to the rapid life which is now in existence.

I have appended no bibliography to this article as excerpts have been taken at random and from personal experience, but to those who would know more concerning this subject, and that should include all physicians whose interest has been nil, I would recommend the study of the pamphlets published by the American Medical Association under the title of "Conservation of Vision Series," which are inexpensive and present an array of eye discussions by the men of authority in this country.

If in writing this paper I have in any way added to your knowledge or stimulated the urge to understand better the eye in relation to medicine, I shall feel that my efforts have not been in vain.

104 South Michigan Ave.

FASCIA SUTURES IN THE REPAIR OF INGUINAL HERNIA*

WILLIAM J. PICKETT, M. D., F. A. C. S.
Assistant Professor of Surgery, Loyola University Medical School
Associate Attending Surgeon, Mercy Hospital
CHICAGO

It is a well known fact that many operations for inguinal hernia are unsuccessful, and that a recurrence of the hernia may follow at varying lengths of time. Chromic catgut, kangaroo tendon and silver wire have been used with only fair results in that class of extensive hernia in men beyond middle life. The disadvantage of catgut and kangaroo tendon is the fact that they are completely absorbed, often much sooner than expected. Even though the suture remains intact until union has taken place between muscle and fascia, it has been shown by Rosenblatt and Meyers that this union consists of a connective tissue formation about the muscle fibres. This connective tissue has a tendency to stretch and in certain individuals is not sufficiently secure to withstand the pull of the abdominal muscles or the stress of increased intra-abdominal pressure.

Silver wire, as a suture, has been discarded, for, while it is permanent, it is also an irritant to the tissues. It may lead to infection and oftentimes must eventually be removed.

Before going any further, it may be well to acknowledge that there are other factors in the recurrence of hernia than the type of suture employed. All will agree that in a successful herniomoty the sac must be thoroughly dissected and ligated as high as possible. It may be fastened beneath the internal oblique muscle at the internal inguinal ring. Transplantation of the spermatic cord may not be necessary in certain types of indirect or oblique hernia. It should be transplanted in the direct hernia and in the indirect hernia with direct weakness. However, we shall not discuss the advantages of one type of operation over another, since this paper has to do only with a particular type of suture employed, and must necessarily be brief.

The use of autogenous fascia sutures in the repair of hernia has not achieved the popularity it deserves. As long ago as 1901, McArthur first reported using strips of the external oblique fascia as a mean of suturing the conjoined tendon and external oblique fascia to the ilio-inguinal ligament. This procedure has many advantages and will be demonstrated later, on the screen. In 1921, Gallie and Lemesurier brought out the use of strips of fascia lata from the thigh. Kunz has used strips of ox fascia prepared in 60 per cent. alcohol. Hodgkins employs transverse strips from the fascia of the rectus muscle, weaving them in place.

The permanency of transplanted fascia has been proven by a number of investigators. Autogenous fascia will remain in situ indefinitely and will produce no reaction in the tissues. Ox fascia strips, while they have the advantage of being ready for use and require no preparation, have the disadvantage, as shown by Rosenblatt and Meyers, that they produce a foreign body reaction in the tissues, with marked vascularization of the grafts, the proliferation of capillaries, and evidence of some absorption.

The Gallie method, consisting of the employment of strips of fascia lata, has the advantage of living autogenous sutures, but it requires an additional incision and prolongs the operation. The McArthur method is simple—it does not require a separate incision and does not increase the time of operation. In addition, the suture is left attached at the pubic bone and needs to be fastened only at one end. A strip of fascia of this type will withstand a pull of 11 to 14 pounds.

I will agree, however, that if the defect is a large one, such a sutre may not be long enough to bridge the gap. In that case one may follow the Gallie technique and prepare a strip of fascia from the thigh.

Burdick, reporting in 1928, has employed it in 163 cases, made up 45 indirect, 14 indirect with direct weakness; 61 direct, 29 recurrent, 10 ventral, 2 umbilical and 2 epigastric. The following were the results: One double oblique recurred at two years. One double recurrent one side at 15 months. One direct at end of one year. One oblique (infected) at 9 months. He gives as his indications: 1, direct hernia; 2, oblique hernia, beyond middle life; 3, femoral hernia; 4, recurrent hernia; 5, ventral hernia. While to my mind the method may not be indicated in certain types of femoral and umbil-

*Read before Section on Surgery, Illinois State Medical Meeting, May 20, 1930.

ical hernia, I believe it to be useful in any case wherein the fascia of the individual has lost its tone and in cases wherein we might expect insecure union between muscle and fascia.

Lyle reports a series of 100 indirect with 3 recurrences; 54 direct cases with 5 recurrences, and 4 direct indirect with no recurrences. Thus in a series of 159 cases there were 8 recurrences, or 5 per cent. In 200 indirect cases with catgut there were 18 recurrences, or 9 per cent; 75 direct cases with 10 recurrences, or 14 per cent. Coley, studying a series of 837 herniotomies using catgut, found 18 per cent. recurrences in the indirect cases. Erdman analyzed a series of 978 cases in patients over 60 years of age and found recurrence in 10 per cent. of the oblique and 42 per cent. of the direct hernias. He now uses the Gallie method in extensive cases and in older individuals.

It is unnecessary to quote further statistics, since the marked improvement in results over the catgut suture has been proven to all who have investigated.

The simplicity of the McArthur method should recommend it to the occasional operator as well as the expert. Great care must be taken to avoid infection, for that usually leads to a poor result and recurrence. I believe that the use of autogenous sutures will restore our confidence in herniotomy for the person beyond middle life, especially in extensive hernia of the direct type.

REFERENCES

Gallie and Le Mesurier: Canadian Med. Asso. Jour., 1921. XI, 504-513.

McArthur, L. L.: Jour. A. M. A., 1901. XXXII, 1162.

McArthur, L. L., Jour. A. M. A., 1904. XL, 111, 1121.

Gallie and LeMesurier: Brit. Jour. of Surgery, 1924.

Hodgkins, E. M.: Surg. Gyn. and Obst., December, 1928. Vol. XLVII, No. 6.

Rosenblatt, M. S., and Meyers, M.: Surg., Gyn. and Obst., Vol. XLVII, No. 6.

Paterson, J. E.: Glasgow Med. Jour., 1928, Vol. XXIX, 109-110.

Burdick: New York State Jour. of Med., 1928, Vol 28, No. 21.

DISCUSSION

Dr. E. S. Murphy, Dixon: I am in full agreement with all Dr. Pickett has said about the efficiency of this suture. At the meeting of the American Medical Association at Atlantic City in 1904, Dr. L. L. McArthur presented an autopsy specimen on which he did a radical hernioplasty four years before. The suture had lived throughout those four years and looked as normal as the fascial structures from which it was taken. This demonstration convinced me of the simplicity and utility of this suture and accordingly, since then, I have employed this suture in the repair of herniae wherever it is practical. In brief, it produces less reaction in tissue than foreign suture material such as catgut or kangaroo tendon and lasts forever.

Dr. A. Merrill Miller, Danville: As a former interne of Dr. McArthur, I have a great deal of interest in seeing his name mentioned in connection with this fascial suture. The use of fascia as suture material is becoming more popular as is evidenced by the fact that each year we see a number of articles dealing with this subject. Three or four years ago in connection with an operation for appendicitis (McBurney incision) it occurred to me that a strip of fascia much longer could be secured by loosening the end below and cutting up well upon the belly muscle to give you a suture.

The advantage of using the suture with the muscle attached to it must be evident, because there can be no question of blood supply.

I think I have overcome one point which has been raised against the fascia suture by doubling the fascia trip back and securing the end so that it is turned back by itself.

Dr. John B. Haeberlin, Chicago: I had the opportunity of working with Dr. McArthur at the time he was developing this autoplastic tendon suture. There are a number of things about it that surgically should be considered, and that is, first, the strength of aponeurosis. Sometimes the aponeurosis is under-developed, it being very thin. In those cases you have to use a considerable width of flap. Sometimes it is very well developed and in these cases you do not need to use such a wide strip.

Another thing about the autotransplant is its tendency to slip. It is very slippery and it will unravel. That has happened a number of times with me. The attachment of the needle to the end of the fascia was the same as Dr. Pickett demonstrated, but working on a cadaver and working on a live subject is a little different.

The autoplastic fascial transplant and suture can be used in many places. For instance, the anchoring up of the kidney. Once in a whille with large hernias you have to take your fascia lata of the thigh and bring it up over the weakened structures of the abdomen. Personally, I have used fascial sutures in ventral suspension and ventral fixation, instead of using catgut. When the fascia is anchored, we always use foreign material to fasten. There has been no way devised up to the present time in which we can fasten the end of it so it will hold in the living individual. You always have to implant some foreign material.

I will say that some men I know who have used fascia transplants and fascia sutures used it for a number of years, have now discarded it, and I do not think Dr. McArthur is using it himself as much as he did some ten or twenty years ago.

Dr. W. J. Pickett, Chicago: So far as the criticism of the suture slipping is concerned, it is a very good one. I did not mention the fact that in order to avoid this we slip in catgut here and there along the course

of the strip of fascia, and then if it does slip at one suture of course the remainder will hold it pretty well in place.

I should like to endorse its use in other things beside the repair of hernia.

SOME OBSERVATIONS ON THE NEWBORN*

A. H. PARMELEE, M. D.,
CHICAGO.

In a good many of our larger hospitals the newly born infants are examined by a pediatrician and cared for under his direction. This fact has meant that an interest is being stimulated in a field more or less neglected until recent years. There have always been a few men who have studied newborn infants carefully, but the great majority of physicians including pediatricians and obstetricians will admit that their first hand information in this field is quite limited. The opportunity that is now available for study of the newborn should increase the general knowledge and make this period of infancy as familiar as any other period in the individual's life.

My justification for talking on this subject, is, that I have had, by chance, the unusual privilege of examining a very large number of newborns in the past four years as a member of the Pediatric Staff of the Cook County and the Presbyterian Hospitals: in round numbers about twelve thousand.

The purpose of this paper is not to discuss the various diseases and peculiarities of these infants as given in our excellent text-books, but rather to call attention to some of the interesting features observed in the course of daily routine examinations and to state some of my impressions. A comprehensive statistical survey of our findings is being prepared which we hope to be able to present at some future date.

To become familiar with the normal, in order to be able to detect variations from the normal, is as important in this field as in any; and one has to examine a goodly number of normal infants before he can intelligently pick out the abnormal ones. It might well be stated here that the thing which has impressed me most is the overwhelmingly large percentage of normal newborns and that most of the variations from the normal have been, from a practical standpoint, unimportant. For the sake of making this point clear let us consider what are the serious abnormal conditions that we may encounter, and try to realize how rare they are. *First;* those due to developmental defects: spina bifida and hydrocephalus, serious congenital heart defects, abnormalities of the digestive tract such as esophageal atresia, atresia at the duodenum and at various levels along the tract including imperforate anus; hare-lip and cleft palate; severe types of hypospadias; epispadias; extrophy of the bladder; anencephaly; abdominal wall defects with evisceration; cystic hygroma of the neck; osteogenesis imperfecta; chondrodystrophy fetalis, and hydrops universalis neonatorum. *Second,* those due to birth injuries or the accidents of labor: cerebral hemorrhage and other intra-cranial injuries; spinal cord injuries; severe brachial plexus injuries; asphyxia pallidum; atelectasis; serious fractures; serious forceps injuries. *Third,* those due to disease of the mother: congenital syphilis; congenitally weak infants due to toxemias from various causes, fetal endocarditis etc. *Fourth,* those due to conditions arising after birth: sepsis of the newborn; pemphigus neonatorum; pneumonia; icterus gravis; thymus disturbances; hemorrhagic disease of the newborn; serious feeding difficulties. Even in a large institution like the Cook County Hospital not one of the above mentioned conditions may be seen for periods of a week or more at a time.

What then are the things we observe if the serious things are so rare? Let us assume that we have an infant in front of us for examination. We will start with the head.

One of the most variable features of the head is the character of the fontanelles and sutures. There is nothing constant about the size of the anterior fontanelle which may be either very large or barely admit the finger tip in perfectly normal infants. So-called embryonic fontanelles are quite commonly present. These are the parietal or sagittal fontanelle consisting of a widening of the sagittal suture a short distance anterior to the posterior fontanelle, the frontal or metopic fontanelle just in front of the anterior fontanelle, the mastoid fontanelles, and occasionally one may feel a definite sphenoidal

*Read before Illinois State Medical Meeting, Section on Medicine, May 22, 1930.

fontanelle just above the zygoma. The cranial bones are sometimes quite thin, and definite soft areas may be felt especially along the suture margins. This is the so-called physiological cranio-tabes. Cephalhematomas occur almost exclusively on the parietal bones, usually only on one side but may be bilateral. We have observed a few on the occipital bone and once on the frontal. I have never seen an infected cephalhematoma. They always eventually disappear spontaneously, but may at times persist for several months. They never need to be aspirated. Over the parietal bosses we sometimes see pressure necrosis ulcers develop, due to long continued pressure of the boss against a bony prominence in the pelvis. The area first looks bruised, then a circumscribed reddened swelling appears, the central portion of which finally sloughs out as necrotic tissue; leaving a deep ulcer which heals with a scar formation and a bald spot. The occurrence of such a condition is usually not recognized, it being mistaken for an abscess and treated accordingly.

Now and then we see infants with a very marked assymetry of the jaw, giving the impression of a fracture of the mandible on one side. When one attempts to close the mouth it is noted that the gums do not meet evenly but gap open on one side. This is due to extreme flexion of the infant's head in its position in the uterus; the chin rotated, so that one shoulder presses firmly against the ramus of the mandible thus moulding it. The condition corrects itself in a few weeks or months. The gums are often very irregular with a veritable saw-tooth margin. Oval shaped ulcerated areas at the junction of the soft and hard palate or on the anterior pillar or the posterior pharyngeal wall are usually due to too vigorous swabbing of mucus from the throat at the time of delivery.

In front of the lobe of the ear, usually on one side only—but occasionally both, we quite often find a small pin point sinus from which can be squeezed a white greasy substance which consists of desquamated epidermis and sebaceous material. These are known as fistula auris congenita and are due to a faulty fusion of the ectodermal buds which form the ear lobe.

The area of telangiectasis so frequently seen at the nape of the neck and popularly known as "stork bites," are also quite often seen on the forehead over the glabella, also not infrequently on the upper lids, and sometimes on the nose and upper lip. These are usually invisible after a year.

Breast engorgement is practically a universal finding in all full term infants, male and female. The degree of engorgement varies a good deal. Engorged breasts need only to be kept clean and left alone. Mastitis we see very infrequently where a "hands off" policy is strictly maintained. In the immature infant the breasts are not engorged and on this subject I am now doing some investigation by which I hope to be able to prove that absence of breast engorgement is a dependable sign of immaturity.

A discussion of congenital heart lesions will not be undertaken here, but I wish only to remark that it is not easy to hear some heart murmurs in the course of routine examination, and I am sure we have missed many. One more point in regard to heart murmurs: they are sometimes plainly heard in the first day or two of life and by the end of a week or ten days are gone.

Nearly all negro, mexican, and mongolian infants have a bluish-gray colored area over the lumbo-sacro-gluteal region due to specific pigment cells in the corium. Such pigmented areas are often seen in infants with mixed blood and a few instances have been reported in pure caucasians. These areas may be on different parts of the body but seldom on the flexor surfaces.

Two racial peculiarities have been noted in the course of our examinations: first, very few negro babies have hare-lip and cleft-palate deformities, and second, in the negro infants polydactylism is extremely frequent, while in white infants it is extremely rare.

In the course of the routine care of newborns we have observed some conditions not commonly mentioned in text-books and I should like to speak of some of these. Infection of a tooth-bud leading to osteomyelitis of the maxillary bone has been observed three times; one infant died, but two recovered after long illness and final surgical removal of sequestra. A case of partial gigantism, the size of the index finger and thumb of the left hand was nearly that of an adult's, while the rest of the hand was of normal size. The infant was normal in all other respects. Three cases of cystic hygroma of the neck. Two cases of ectopia testis in which one

testicle was in the perineum outside of the scrotum. One case of unilateral exophthalmus due to hemorrhage into the cellular tissue of the orbital fossa similar to the condition sometimes seen in severe scurvy. In this case there was complete subsidence of the swelling in about four weeks. Several cases of so-called congenital impetigo or pyodermia, in which there were pustules on the skin when the infants were born.

I am aware that no startling statements or brilliant discoveries have been recorded in this paper, but if by these remarks, interest in this important field has been stimulated, I shall be satisfied. Let us remember that each newborn infant is an individual patient, just as truly as is its mother, and deserves a careful physical examination and intelligent care.

310 S. Michigan Ave.

DISCUSSION

Dr. C. C. Jones, Bloomington: I believe more emphasis should be placed upon closer co-operation between the obstetrician and the pediatrician. Careful examination and observation of the newborn will enable one to not only recognize the normal infant but to distinguish deviations from the normal. If proper treatment is started at once infant mortality will be reduced and later suffering prevented. While congenital heart murmurs vary from time to time they are of little concern unless other symptoms are present. I have not seen osteomyelitis in the newborn. It is not uncommon among children and when we find it in the jaw we usually find several other lesions, especially involvement of the long bones. Congenital dislocations of the hip are easily diagnosed but frequently overlooked, and special attention should be paid to that part of the body. Dr. Parmalee is to be congratulated on the observations he has made in compiling this comprehensive paper.

Dr. A. H. Burr, Evanston: Regarding the prevalence of extra digits in the colored race and the fact that this is a hereditary peculiarity. Over forty-five years ago I delivered a young colored mother of a child with two extra fingers, one at the base of each little finger. The mother of my patient was present, and she stated she had had them, and they had been removed; the mother of the new infant had also had them. There was no bony union with the palm of the hand in my cases.

Dr. W. L. Crawford, Rockford: Dr. Parmalee is doing a distinct service to the profession in attempting to bridge this gap which exists the first two weeks in every child's care. Ordinarily the youngster is more or less overlooked unless there is something drastically wrong. I think they are allowed to drift along for a few weeks, unless there is something really abnormal to attract attention.

It is worth while stressing the factor of breast engorgement. Since I have known he was interested in this, I have made it a point to watch carefully for that condition, and have yet to find in any youngster I thought was immature any signs of breast engorgement. You cannot miss it if it is present.

As to the care of cephalhematoma; sometimes these blood tumors have been drained. There is no need of it. They never become infected if left alone, and about the only way they can become infected is for the physician in charge to introduce infection from outside in opening the swelling.

Dr. R. H. Graham, Aurora: Do you consider coagulation time and bleeding time of any great importance in making these examinations?

Dr. George E. Baxter, Chicago: I am sorry Dr. Parmalee did not have time to discuss in more detail some of his other observations. There are some diseases that develop in the new-born which are common and which merit careful consideration. The frequency with which fever develops in the new-born in the first few days of life is apt to be misinterpreted or may not stimulate enough interest in the infant by the physician. The infant often develops fever from inanition. Fevers from this cause have been too frequently misinterpreted; the baby is treated for intestinal disturbance, and given castor oil, which is not good treatment. Other infections may occur. One simple thing is infantile impetigo, frequently observed, which although not a serious condition in an infant, the lesions may become secondarily infected and a mild eruption become a serious one. I would like to stress the importance of a careful examination of a new-born infant that develops fever, and the fact that seldom if ever is the intestinal tracts responsible for the temperature that develops.

Dr. A. H. Parmelee, Oak Park (closing): I saw the first case of osteomyelitis of the jaw in Pirquet's clinic in Vienna six years ago. I found there was very little literature on the subject, though Finkelstein's textbook has some good work on it. Perhaps it is primary tooth-bud infection in the majority of cases, although osteomyelitis might be part of the general sepsis of the newborn. I have seen osteomyelitis of the clavicle and of the sacrum in a child as part of general sepsis of the newborn. We had recently an infant of two months with osteomyelitis of one elbow and one hip which started at three weeks of age. As to the congenital dislocation of the hip, in the examination of 12,000 infants I have not seen one. I may have skipped one, but I do not believe so. Congenital hip dislocation must be rare. The extra digits nearly always occur in negro babies. They are pendulous, thin pedicles, with one little cartilage or bone and a tiny nail. We tie them off. Dr. Crawford, if you see a lot of new-born infants, it would be interesting to me if you would pay special attention to breast engorgement. Immature new-born infants have no breast engorgement for some physiologic reason. Whether the hormone has to work longer and has not finished its work until the baby is full term, I do not know. It is the only sign of immaturity I can depend upon in the border-line cases.

You cannot go by the mother's statement of last menstruation. As to coagulation and bleeding time, we do not regularly make that test at County; we do at Presbyterian. It is not always dependable. If it is greatly out of proportion and does not soon return to normal, something should be done about it, particularly if the child had a difficult birth. We know there are such things as transitory fevers that take care of themselves as soon as the baby gets fluid. That does not mean that you should not make a complete physical examination to see if there is something else wrong. If nothing else is found you can go on the supposition that it is a transitory fever. Respiratory infections cause most of the fevers not due to dehydration. I purposely avoided the subject of bowel infections and laxatives. I do not believe in laxatives, and I have not given a dose of castor oil for many years. In regard to the prepuce. It has infrequently been our experience that it is so tight that it interferes with passage of urine; I have seen a few cases. I think the importance of irritation due to a tight prepuce has been exaggerated.

MEDICAL AND SURGICAL COOPERATION IN PEDIATRICS*

CHARLES K. STULIK, JR., M. D.,
CHICAGO.

Realizing the definite benefit derived from the close cooperation of the obstetrician and pediatrician in the development of the new-born service, we are developing a close cooperation of the surgeon and pediatrician in the management of surgical cases. Our plan consists of entering all dispensary, surgical cases on a joint medical and surgical service. At first naturally there was some question of the division of labor and responsibility. The medical service takes the history, which includes the family and past history. In preoperative tonsil cases especial attention is focused on the history of frequent sore throat, chorea, growing pains, definite rheumatism, scarlet fever and otitis media. A complete physical examination is made and special tests as tuberculin reaction, x-ray, blood chemistry and skin tests are made when indicated. Except in emergencies definite preoperative preparation is carried out until the surgeon and pediatrician feel that the patient is well able to undergo operation. In infants especially, a careful dietary regime is instituted and fortified with such factors as viosterol and fruit juice. Where indicated calcium lactate and syrup of iron iodide are added as a tonic. It is our impression that sunlight or ultraviolet light has been useful in the improving of appetite and the general well being of those children with chronic infections as endocarditis. The mental attitude of the older child is also improved during the preoperative preparation and this is a factor in improving him as a surgical risk. Other medication as arsenic, digitalis, salicylate and sedatives is used as indicated.

The end results in our cleft palate and harelip babies have been most gratifying. These infants are carefully examined and foci as pyelitis, otitis media and furunculosis checked or eliminated. An adequate diet is given by dropper or spoon. Operation is performed when the infant is gaining weight and has an improved tissue turgor. Urinalyses and blood examination are repeated in infants with pyelitis and anemia. In a few instances a preliminary blood transfusion has been of definite value in bolstering the infant. A routine roentgenogram of the chest is made in cleft palate babies, because of the rather frequent association of enlarged thymus. After operation a quiet, restful infant is a factor in healing and decreasing tension on the sutures. Most of the small infants rest after doses of 5 to 10 minims of paregoric, but some will require addition of several grains of bromide. We have not had to resort to stronger medication.

In the preliminary management of cleft palate drawing together with strips of adhesive appears to be of no value. The skin is easily irritated and enough traction to increase approximation of the cleft cannot be obtained with ordinary adhesive plaster traction. Dropper, or in some instances, spoon feeding is carried out in the postoperative feeding to prevent nipple pressure and tension on the sutures. Most of the cleft palate infants are given calcium lactate, viosterol and syrup of iron idodide before and after operation.

The nose and throat cases are given a complete physical examination and those with any cardiac findings are checked by a cardiologist.

The children with chronically enlarged tonsils are regarded as precardiacs, when there is a history of either chorea or rheumatism. Recently a boy of ten, diagnosed as a congenital pulmonary stenosis with ductus arteriosus patency,

*Read before Illinois State Medical Meeting, Section on Medicine, May 22, 1930.

*From Pediatric Service, Presbyterian Hospital and Central Free Dispensary.

developed an acute cardiac dilatation two days after tonsillectomy, under general anesthesia. His left heart border suddenly dilated to the anterior axillary line. His pulse increased to 140 and his respirations to 40. X-ray verified the dilatation. Under subcutaneous digitalis therapy the signs of acute cardiac decompensation disappeared and within 72 hours the left border was found back in the midclavicular line. This illustrates that cardiac involvement, even though apparently quiescent may be the cause of definite postoperative disturbance.

All preoperative tonsil cases are referred to the dentist for mouth hygiene before operation. This procedure decreases the postoperative pyogenic membrane and prevents the aspiration of loose teeth, which may be forced out of the alveolar arch by placing or removing the mouth gag. In a recent postoperative pulmonary abscess a tooth fragment was coughed up spontaneously with pus. It was not apparent in the roentgenogram taken on two different days.

Medical and surgical cooperation will increase our diagnostic ability in such borderline cases as lower central pneumonia, diaphragmatic pleurisy, appendicitis, diverticulitis and abdominal adenitis. Recently a boy of twelve was operated on because of pain, tenderness, distension and vomiting. The left abdomen was rigid, painful and tender. Because of recent typhoid fever a tentative diagnosis of perforated typhoid ulcer was made. The youngster had been a febrile for about 20 days. The resident medical staff had one urinalysis. At operation a left pyelonephritis was palpated through the abdominal incision. An interesting observation was that the lymphatics were markedly injected and the abdomen was otherwise unchanged. The first postoperative urine contained a large quantity of pus. An uneventful postoperative recovery resulted.

Last winter a boy of eight came to us with pain and tenderness in the right abdomen. There was slight vomiting and rectal examination showed some tenderness and resistence in the right side. Because of increased bronchovesicular breathing in the right lower chest an x-ray was made. A right lower central pneumonia was revealed. With the appearance of a frank lower lobe pneumonia the abdominal symptoms disappeared.

Osteomyelitis cases, especially when the hip is involved often present difficulties in diagnosis. With cooperation we will develop diagnostic points in the differential diagnosis of arthritis, osteomyelitis, tuberculosis and deep pelvic and inguinal adenitis.

Acidosis and cyclic vomiting are seen as essential symptoms of appendicitis or diverticulitis of the chronic type. A similar acidosis is seen in some children following ether anesthesia and our diagnostic skill must be keen in the differentiation. With co-operation our correlation of symptoms and pathology will improve.

The advantages of medical and surgical co-operation are:

1. The patient becomes a better surgical risk.
2. The surgeon obtains better end results.
3. The pediatrician improves his diagnostic and therapeutic ability.

1658 W. 21st St.

DISCUSSION

Dr. George E. Baxter, Chicago: It is unfortunate that there are not more people present to hear this paper, because this co-operation is one of the fundamental things, in the practice of medicine. We started some years ago the out-patient department of the Children's Memorial Hospital to bring about greater co-operation between surgery and medicine. We have not met with complete success as yet. We have a very large clinic which is difficult to manage, and we have not thoroughly convinced the surgeons as to our point of view. We did start in the tonsil department. We insisted that every case that was up for tonsil operation should first be passed upon by a medical man. It is certain that the whole tonsil problem is not settled. It is necessary that there should be an increasing co-operation in the decision as to that one thing alone. It is an important thing to remember this; the average general practitioner or pediatrician is in a much better position to determine the indications for removal of tonsils. We can say to the man who does the work that he is better able to do it, but the practitioner should decide whether or not it is necessary. The subject of this paper is important and a matter that is much discussed in medicine today.

Dr. Charles K. Stulik (closing): Palpation of a child's abdomen should be very gentle. One should gain the child's confidence, go about it gradually, and before you know it you can palpate the spinal column. Sometimes the mere fact that your hands are cold will cause the child to shrink and cause a voluntary rigidity. We look for a rigidity, of course, but all children are given a routine examination. It has been our idea to leave the complaint for the last part of the examination, so that we are not likely to miss some other point that may be out of bounds. An interne on the orthopedic service recently asked me to look at a youngster with

a temperature of 104°. He thought something was wrong under the cast. When I approached the child, there was the definite odor you get from diphtheria. Because he was on the orthopedic service he felt that the trouble should be under the cast, and it did not occur to him to look elsewhere by making a complete physical examination.

THE SURGICAL AND ECONOMIC PROBLEMS OF INFANTILE PARALYSIS*

EDWIN W. RYERSON, M. D.
Professor of Orthopedic Surgery, Northwestern University, Medical School
CHICAGO

The successful solution of the surgical problems of infantile paralysis would imply a similarly successful solution of the economic problems, but it must be acknowledged that in spite of the many important advances of later years in the treatment of these cases, the final solution has not, as yet, been attained.

Each year the disease reaps a new harvest throughout the world, and leaves behind it a varying but always considerable number of individuals whose earning capacity will forever remain impaired by a permanent loss of power in some of their muscles. The extent and distribution of this paralysis will determine the amount of each patient's physical handicap as a wage-earner. The reduction of this disability to the individual minimum is the surgical problem with which we are confronted. The economic problem concerns itself with the providing of work which can be performed by the handicapped. The surgical problem is to restore usefulness to paralyzed limbs and stability to weakened spinal columns.

It is fortunate that the disease is much more apt to affect the feet and legs than the rest of the body, because it is much easier to correct permanently the deformities and weaknesses of the lower limbs than it is to restore the intricate and highly differentiated functions of the arms and hands. Each case represents an individual problem which must be studied carefully. The manifestations of the disease may conveniently be divided into three stages: first, the acute, or stage of onset; second, the stage of repair; and the third, the chronic stage. This paper does not deal with the acute stage. During the stage of repair, which lasts for two years, deformities are to be prevented, so far as possible, by suitable apparatus, and any muscles which are not completely paralyzed are to be strengthened by muscle-training.

At the end of two years of this treatment it is time to make plans for permanent relief of the remaining disability. As a general principle, reconstructive surgery is more apt to succeed in older patients than in the very young. It is therefore wise to continue with the conservative treatment in small children unless the deformities are increasing too rapidly, until the age of eight, ten, or even twelve years. This means that if the patient is getting along well enough in the braces, and is satisfied to continue wearing them, it is well to wait until near the age of puberty before performing radical operations.

The general principles underlying the operative procedures are based upon the endeavor to improve the functions of the impaired machinery of the body. All attempts to restore the function of the paralyzed nerves have, up to this time, been failures. It would, of course, be ideal if the motor cells in the anterior horns of the cord could be rehabilitated, because here is the essential primary lesion, but it is not in our power to repair these damaged cells. Many efforts at the transplantation or grafting of the peripheral nerves have been made, with negative results. Nerve ends have been planted into the paralyzed muscles (neurotization) with similar failures. Thus our possible points of attack are reduced to the muscles and the joints.

In cases where only one or two muscles remain permanently paralyzed a well-planned and well-executed tendon or muscle transplantation may be of great benefit. The best example of this method is in the case of a drop-foot where the paralyzed tibialis anticus can be replaced by the use of the healthy extensor proprius of the great toe, or by moving the peroneus longus to the anterior surface of the leg and passing it down the sheath of the tibialis anticus and suturing it to the inner cuneiform. Paralysis of the great calf muscle can be improved by inserting the peronei and the posterior tibial into the os calcis. If there is any sidewise deformity of the foot, such as a valgus or varus, this deformity must be corrected by a wedge-shaped osteotomy. A long experience has convinced me that practi-

*Read before Section on Surgery, Illinois State Medical meeting May 20, 1930.

cally all cases with paralysis of the leg and foot should have the lateral mobility of the foot stabilized by ankylosing these joints which allow this lateral mobility. These joints are first, the subastragaloid, between the bottom of the astragalus and the top of the calcaneus, the astragaloscaphoid and the calcaneocuboid. When these four bones have become firmly welded together a solid and useful base for weight-bearing is formed which will ordinarily show no tendency to become laterally deformed into a club-foot or a pes valgus. In most cases it is wise, at the time of operation, to displace the foot backward to a greater or lesser degree so that the tibia will be more nearly in the center of the foot. It is sometimes wise to ankylose the joints anterior to the ones mentioned above, in cases of marked varus or valgus deformity, so that the scaphoid fuses with the cuneiforms and the cuboid with the fifth metatarsal.

The object of all this work is to provide a foot which will carry the weight of the body without giving way or becoming twisted to one side or the other, and will have enough power in flexion and extension to propel the body properly. The lateral motions of the foot are neglected and obliterated entirely, as in these cases they are only sources of trouble. In a few cases it is undoubtedly wise to ankylose the ankle joint itself, where no muscle remains which can be used competently to control motions of the foot.

In connection with practically all tendon transplantations in the foot the stabilizing operation described above, and to which I gave the name in 1923 of "triple arthrodesis," will be found not only advantageous but even absolutely necessary.

Whitman's astragalectomy, which has been widely used for various paralytic deformities, has given its best results in calcaneo-valgus deformities. Its chief defect is in the lack of control over the lateral mobility of the foot. It is my impression that this operation is not used as frequently as a few years ago. Many feet with greater or lesser muscle power can be made strong and serviceable by the proper operations. One may almost state that every paralyzed foot can be improved by operation, but this work must be done by those who have given especial attention to the subject.

In similar manner weakness and deformity in the knee and hip can sometimes be greatly improved either by muscle transplantation or by ankylosing the joints. If the spinal muscles are sufficiently paralyzed to result in lateral curvature of the spine or scoliosis it is undoubtedly the best of wisdom to perform an ankylosing operation upon the weakened portion of the spine as soon as it has evidently become impossible to control the progress of the deformity by more conservative measures.

The orthopedic treatment of these classes of the handicapped is highly complicated and highly specialized, and should be carried out as far as possible in Orthopedic Institutions with the co-operation of the State of Illinois, which should provide adequately for the children during the long period of institutional stay, and should later provide suitable employment for these individuals after the maximum of physical improvement has been attained by the orthopedic surgeon.

122 S. Michigan Ave.

DISCUSSION

Dr. Hugh Cooper, Peoria: This was certainly a very concise and clear-cut discussion on the problem of the paralytic child, and as Dr. Ryerson has hinted, the problem is not only one of correction of these feet and hands, but it is an economic problem which the country throughout is just beginning to appreciate properly.

The larger cities such as Chicago, of course, have taken care of their crippled infantile cases in institutions, and have taken care of their education and proper rehabilitation for some time, but we in the smaller cities and rural communities are just beginning to appreciate the problem we are up against in trying to take care of these children.

Simply correcting one of these little feet is not all that can be done for them. They never can be good feet. They are made as good as surgery can make them, but still they are weak feet. The lives of these children must be regulated and they must be educated so they can be put to some sort of work by use of their heads or hands and so make themselves independent. Throughout the state I think we are just now beginning to see these schools and hospitals appear for crippled children where this work is being carried out.

I think we are all conversant with a dozen corrections to stabilize various types of paralytic and deformed feet. but we must admit that the fundamental idea in most of these corrective procedures rests on the so-called triple arthrodesis of Dr. Ryerson. That is the arthrodesis or fusion between the astragalus and the oscalcis, between the astragalus and the scaphoid, and between the os calcis and the cuboid. Whatever we do to these paralytic feet, if we want to keep them

as we fix them at the time of operation, we have got to stabilize or fuse those three joints.

Probably the only outstanding operation that does not use this fundamental is the operation which Dr. Ryerson mentioned, Whitman's astragalectomy, which is, I think, coming to be recognized as applicable to only a small percentage of the deformed feet. The outstanding case is calcaneus deformity, which some of us still believe gives better results with an astragalectomy.

I am happy to have had the chance to discuss this paper. I think it covers the ground very satisfactorily.

Dr. Robert Ritter, Chicago: In our clinic we are using the triple arthrodesis more than Whitman's astragalectomy for all types of feet. Several times we have had to go in on feet which have had the astragalus removed. It is very difficult to correct those feet after they have been operated on and the feet not set far enough back.

PSITTACOSIS

T. M. Rivers, G. P. Berry and C. P. Rhoads, New York (*Journal A. M. A.*, Aug. 23, 1930), conclude from their studies that the virus of psittacosis is in the feces and in the material collected from the nose, mouth and procrop of infected parrots Parrots and monkeys can be infected by intranasal instillations of the virus. Parrots and rabbits that have recovered from a primary infection are refractory to reinfection. It is not a simple matter to demonstrate neutralizing properties in convalescent human serum. In parrots and in mice, the principal lesions occur in the liver and spleen. Young monkeys (*Macacus rhesus*) are susceptible to intracerebral, intratracheal and intranasal inoculations of psittacosis virus. When it is instilled in the nose or injected in the trachea a characteristic pathologic picture occurs in the lungs which is similar to that observed in man.

SENSORY DISTURBANCES FOLLOWING OPERATIONS OF THE KIDNEY

A case of neuralgia of the twelfth intercostal nerve following traumatization as a result of surgical exploration of the kidney is reported by C. B. Huggins and Paul C. Bucy, Chicago (*Journal A. M. A.*, Aug. 30, 1930). The pain radiated from the right flank to the right groin, simulating ureteral pain. There was a marked hyperalgesia in the same area. The nerve was resected, resulting in a complete cure. Microscopic examination revealed evidence of previous severe trauma to the nerve. The case is presented as an example of a possible complication of operations on the kidney and for consideration in the differential diagnosis of ureteral pain in patients who have had a previous operation in this region.

SALINE IRRIGATIONS IN GONORRHEA

The success attending saline irrigation of wounds suggested to Clarke that a similar process might be effective in gonorrhea. Astringents like potassium permanganate are apt to close the crypts in the urethra and thus prevent the entrance of the irrigating solution to infected areas. He treated sixty cases at the British Military Hospital, Rangoon—thirty with saline irrigations (1 per cent common salt) and thirty with potassium permanganate 1:10,000. The cases were nearly all of a severe and chronic type. Those treated with saline averaged 44 days for recovery, exclusive of two relapses, while the permanganate cases averaged 61 days and eight relapses occurred. The saline treatment is much less expensive than with permanganate, and Clarke regards it as being of proved value. —*The Prescriber.*

ACUTE TUBERCULOUS IRITIS

F. H. Verhoeff, Boston (*Journal A. M. A.*, Aug. 23, 1930), relates the case of a man, aged 64, with retinitis pigmentosa, blind for more than twenty years, who developed in one eye acute fibrinous iritis clinically similar to acute "rheumatic" iritis. Roentegn examination of the chest showed marked evidences of old pulmonary tuberculosis. There was no cough or elevation of temperature. On account of pain the eye was removed about five days after the onset of the subjective symptoms. Microscopic examination showed small recent tuberculous foci in the iris which had given rise to a fibrinous exudate in the pupil. The acute reaction may have been due to an allergic condition of the patient toward tuberculous toxins. Since the case does not conform to any type of tuberculous iritis hitherto recognized, it suggests that some, possibly many, cases of supposed "rheumatic" iritis are due to tuberculosis.

THE HOSTS OF TULAREMIA

Tularemia is principally a disease of wild life. In conserving wild life are we in danger of enlarging the reservoir of infection from which human cases are derived? The suggestion was made recently by Dr. R. G. Green of the University of Minnesota. He points out that with a single exception all recorded human cases appear to have been derived from infected animals or intermediate insect hosts. Infection is not passed ordinarily from man to man even when special precautions are not taken to avoid it. Dr. Green suggests that the frequency of human infection is probably a cyclic phenomenon depending on exacerbations of the disease in the animal reservoir. Until some means of combating the disease at this point is discovered, as for example the destruction of the deer fly and the ticks that act as intermediate hosts, the conservation of wild life is liable to extend the incidence of the disease in man.—*Jour. A. M. A.*, Aug. 30, 1930.

Society Proceedings

ALEXANDER-PULASKI COUNTIES

The Alexander-Pulaski County Medical Society met at the Halliday Hotel January 23. Invited as our guests were the members of the Alexander County Dental Society.

H. A. Moreland, D. D. S., read a paper on "Focal Infection and Tooth Question." The Doctor presented

a very thorough and scientific paper with illustration by numerous lantern slides and x-rays. It is planned to have other meetings with the dentists to study questions of mutual interest.

JAS. S. JOHNSON.

COOK COUNTY

CHICAGO SOCIETY OF INDUSTRIAL MEDICINE AND SURGERY

Meeting February 4, 1931

1. Fractures of the Humerus.....William R. Cubbins
2. Report of Five Hundred Consecutive Cases of Fracture of the Humerus in the Wards of the Cook County Hospital.....Carlo Scudari

Discussion

Philip H. Kreuscher Arthur Conley

CHICAGO ROENTGEN SOCIETY

Meeting February 11, 1931

Symposium on Urinary Lesions

Uroselectan.....B. H. Nichols, Cleveland Clinic
Pyelography .....Herman Kretschmer
Irradiation Treatment of Malignant Urinary Lesions. .....U. V. Portmann, Cleveland Clinic

Discussants

Robert Herbst C. M. McKenna
Jos. Eisenstadt Roswell Petit
Robert A. Arens

CHICAGO MEDICAL SOCIETY

Joint Meeting with the North Side Branch, Feb. 18, 1931

Fifth Annual Ochsner Memorial Surgical Lecture

"The Present Trend of Blood Vessel Surgery"..... .....R. W. McNealy

CHICAGO MEDICAL SOCIETY

Joint Meeting with the Chicago Tuberculosis Society February 25, 1931

Clinical Studies of the Immunizing Value of "Natural" Bacterial Antigens. I Pneumococci..... .....Don C. Sutton
(In Association with Arthur Isaac Kendall, Ph. D., and Albert Rosenblum, M. D.)
Discussion .....Charles Elliott
Incidents, Frequency and Diagnosis of Growths of the Mediastinum.....Charles Spencer Williamson
The Diagnosis, Prognosis and Treatment of Tuberculosis in Childhood.....Professor Franz von Groer
Dir. Children's Clinic, University of Lemberg, Poland
Theodore B. Sachs, Visiting Professor
Discussion.....Joseph Brememann and Julius Hess

KANE COUNTY

The Kane County Medical Society held its February meeting at the Elgin State Hospital, through the courtesy of Doctor Charles F. Read, newly appointed Superintendent. Fifty members were present to hear the program by Doctor Carl B. Davis of Chicago on "Cervical Rib" and Doctor George Wiltrakus of the Elgin State Hospital on "Medical and Surgical Work in a State Hospital."

The Elgin State Hospital staff is now 100 per cent. in its membership in the Kane County Medical Society.

SANGAMON COUNTY

Regular meeting of Sangamon County Medical Society met at the Leland Hotel Thursday evening, February 5.

Dinner at 6 P. M., well attended by local men and visitors from Decatur and Jacksonville.

Very delightful and interesting talk on "Allergy" by Dr. Harry L. Alexander of St. Louis. Discussion by Doctors Herndon, Kelly, Cole, Rosen, Zelle, Rich and Wiley.

Several new members admitted to County Society.

We have had 120 paid up members the past year and are planning on at least 130 in 1931 by making the County Society so active and interesting that our non-members will want to come in.

HOMER P. MCNAMARA, M. D.

Marriages

GEORGE R. LEONARD to Mrs. Mary Perkins Burgess, both of Chicago, Dec. 31, 1930.

VIVIEN P. SIEGEL, Collinsville, Ill., to Miss Jessie Little of Edwardsville, Nov. 27, 1930.

HUGH D. STITES to Mrs. Ethel Morrison, both of Aledo, Ill., January 22.

Personals

Dr. Julius H. Hess, Chicago, addressed the Rock Island County Medical Society, February 15, on "Focal Infections of Childhood."

Dr. Harry C. Rolnick was appointed, February 4, as consulting urologic surgeon for the Illinois State Industrial Commission.

Dr. George Milles, among others, addressed the Chicago Pathological Society, February 9, on "Primary Carcinoma of the Jejunum."

Dr. Ralph C. Hamill, Chicago, addressed the Champaign County Medical Society, February 12, on prevention of nervous disorders.

Dr. Clark W. Finnerud, among others, addressed the Chicago Ophthalmological Society, February 16, on "Skin Diseases of the Eyelids."

Dr. Henry Schmitz, professor of gynecology, Loyola School of Medicine, received the gold medal of the Radiological Society of North America for 1930, for achievement in the science

of radiology in its application to diseases of women.

A. McCrea, Ph.D., Detrot, addressed the Chicago Council of Medical Women, February 6, on "Parasitic Fungi of the Skin," and Rosalie M. Parr, Ph.D., "Effects of Germanium and Selenium Compounds on Blood Morphology."

Dr. James H. Hutton, Chicago, addressed the Vermilion County Medical Society, Danville, February 3, on "Endocrine Disorders Occurring in General Medicine," and the DeWitt County Medical Society, Clinton, February 11, on "Diagnosis and Treatment of Common Endocrine Disorders."

Dr. Vilray P. Blair, St. Louis, delivered the seventh Lewis-Linn-McArthur lecture of the Billings Foundation of the Institute of Medicine of Chicago before the institute and the Chicago Surgical Society, February 27, on "Facial Abnormalities, Fancied and Real; the Reaction of the Patient, and Their Attempted Correction."

Dr. Max Thorek recently exhibited some photographic studies at the fifth annual art exhibit of the New York Academy of Medicine.

Doctor R. W. McNealy delivered the Fifth Annual Albert J. Oschner Memorial Address, February 18, at the Joint Meeting of the North Side Branch of the Chicago Medical Society. The subject of the address was "The Present Trend in Blood Vessel Surgery."

Doctor Geza deTakats delivered a series of six lectures at the Post Graduate Course in Surgical Diagnosis of the Universities of Kansas and Oklahoma, from February 9 to February 13. His topics were Pre and Post Operative Administration of Fluids, Simple and Safe Methods in Local Anesthesia, The Treatment of Varicose Veins, Obliterative Vascular Diseases of the Extremities, Diagnosis and Treatment of Diseases of the Pancreas, and Diagnosis and Treatment of Diseases of the Spleen.

News Notes

—A symposium on sterility was conducted before a joint meeting of the Chicago Gynecological and Urological societies, February 26.

—The annual conference of the Chicago Association for Child Study and Parent Education was held at the Palmer House, March 28.

—The Society of Medical History of Chicago was addressed, February 20, at the Archibald Church Library, Northwestern University, 303 East Chicago Avenue, by Dr. M. Herbert Barker on "Richard Bright and His Contribution to Renal Pathology"; J. Barry Anson, Ph.D., "Thomas Willis and His Contribution to Anatomy," and Dr. Irving S. Cutter, "A Brief Description of Some Source Items in the Church Library."

—The showing of three motion pictures with sound took place, February 11, at St. Luke's Hospital; the pictures are the work of Dr. Harold O. Jones, associate professor of obstetrics and gynecology, Northwestern University Medical School. The titles are "Suspension of the Uterus for Retrodisplacement"; "Salpingectomy and High Fundic Amputation for Residues of Tubal Disease," and "Vaginal Hysterectomy for Uterine Prolapse."

—An institute for lay boards of hospitals and public health nursing organizations was held in Chicago, February 17, under the auspices of the Central Council for Nursing Education, concurrently with the annual congress on medical education, licensure and hospitals. Among the speakers were Carl E. Buck, D.P.H., Detroit, on "Responsibility of the Citizen for Community Health"; Dr. Henry S. Houghton, Iowa City, "The State University and Nursing Education"; Mis Isabel Stewart, of Columbia University, New York, on "The Present Trend in Nursing Education," and Miss Adda Eldredge, Madison, Wis., "Relation of the School of Nursing to the Board of Directors." At a dinner given jointly with the Council on Medical Education and Hospitals of the American Medical Association, Monday evening, February 16, Dr. Henry A. Christian, Boston, spoke on "The Clinic as a Center of Graduate Study."

—Sharp & Dohme announce their success in synthesizing on a manufacturing scale a new intestinal antiseptic with one hundred times the germicidal power of phenol. The new chemical substance is DI-HYRHANOL.

This new synthetic chemical possesses over 100 times the bactericidal power of phenol at body temperature. It destroys the putrefactive flora of the intestinal tract with certainty and regularity. It is non-toxic in therapeutic doses.

—Dr. Roy O. Hawthorne, of Monticello, has received the appointment as managing officer of

the Kankakee State Hospital to fill the vacancy caused by the death of Dr. George S. Edmonson, according to announcement Thursday, February 12, by Rodney H. Brandon, state director of public welfare. Dr. Hawthorne took charge of the hospital on Feb. 15.

Dr. Hawthorne attended Illinois Wesleyan university, Bloomington. He received his doctor's degree from the Northwestern university medical school in 1913, and served his internship in Wesley Memorial hospital in Bloomington. He served as a medical officer during the World War.

Dr. Hawthorne has been practising in Monticello since 1918. He is secretary of the Piatt County Medical society, and a member of the medico-legal committee of the Illinois State Medical society. He is also commander of the 19th district of American Legion.

—The Library of the College of Medicine of the University of Illinois now has a display of early medical Americana, among the items exhibited being a copy of Vol. 1 of the Medical Repository appearing in 1798, this being the first American Medical Journal. There is also a collection of the writings of Benjamin Rush and an autographed copy of a work by Marion Sims. There is a copy of the first medical dictionary compiled by an American and the little book on Digestion by Beaumont. The exhibit includes photographs of many of the men whose names are known to the student of medical history in the United States.

—Following the custom of interspersing the medico-historical exhibits at the library of the College of Medicine of the University of Illinois with collections representing the Avocational interests of various faculty members, the exhibition room of the library is now given over to a collection of some hundred and fifty bird pictures made by Dr. and Mrs. C. I. Reed. Each picture represents some characteristic of the birds represented in this interesting ornothological exhibition.

—At the annual meeting and election of the staff of the American Hospital of Chicago, the following officers were elected: Dr. W. B. Gerhard, president; Dr. A. J. McCarter, vice-president, and Dr. A. R. Hollender, secretary.

A number of additions were made to both the medical and surgical staff.

—The following papers were presented, February 16, before the Chicago Society of Allergy: 1. Hyperesthetic Rhinitis and Asthma Due to Digestive Ferments, Wm. L. Beecher. 2. Resume of Passive Transfer in Allergy, L. E. Markin. 3. Review of Recent Books on Allergy, with Comments, Leon Unger.

—The Chicago Council of Medical Women held their regular monthly meeting at the Medical and Dental Arts Club, March 6, 1931. Program—*Physiotherapy,* A. T. Clopton, M. D., Chief of Reconstruction Service, Edward Hines, Jr., Hospital, Maywood. *Occupational Therapy,* Gertrude Sample, Occupational Director, Edward Hines, Jr. Hospital, Maywood. Discussion, Lena K. Sadler, M. D.

—The regular meeting of the Woman's Auxiliary to the Chicago Medical Society was held March 4, in the club room of the Medical and Dental Arts building.

Dr. Charles E. Humiston, Chicago, member of the Council on Medical Education and Hospitalization of the American Medical Association, spoke on the subject of "Hospital Control."

—Professor Franz von Groer, Director of the Pediatrics Department, University of Lemberg, Poland, is a visiting professor at the University of Illinois College of Medicine. The Theodore B. Sachs Memorial Fellowship has been established at the University of Illinois College of Medicine through a grant from the Chicago Tuberculosis Institute. Professor von Groer is giving the following clinics and lectures in Chicago:

February 14—Pediatrics Clinic, Cook County Hospital.

February 16—Lecture on the Scarlet Fever Problem, Northwestern University.

February 17—Lecture on the Hygiogenesis of Infectious Diseases, Chicago Pediatrics Society.

February 17—Clinic, Cook County Hospital.

February 19—Pediatrics Clinic, Norwegian American Hospital.

February 21—Pediatrics Clinic, Cook County Hospital.

February 22—Pediatrics Conference, Research & Educational Hospital.

February 24—Lecture on Congenital Syphilis, Mercy Hospital.

February 25—Lecture on Measles, University of Illinois, College of Medicine.

February 25—Lecture on the Esophylactic Importance of the Wheal and Its Immunity and Hygiogenesis, Research Hospital (Library).

February 25—(Lecture), Institute of Medicine and the Research Club of the University of Illinois.

February 25—Lecture—Diagnosis, Prognosis and Treatment of Tuberculosis in Childhood, Chicago Medical Society and Chicago Tuberculosis Society.

February 26—Pediatrics Clinic, Cook County Hospital.

March 3—Pediatrics Clinic, Presbyterian Hospital, 9-11 a. m.

March 3—Lecture—Differential Diagnosis of Fever in Children, German Medical Society, 8 p. m.

March 4—Lecture—Diet and Fever, Billings Hospital, 12-1 p. m.

March 4—"Pediatrics and Children's Welfare in Europe," Faculty Meeting, University of Illinois College of Medicine, 5:30 p. m.

March 5—Pediatrics Clinic, Research Hospital, 1-2 p. m.

March 7—Pediatrics Clinic, Cook County Hospital, 10-12.

March 11—Pediatrics Clinic, Cook County Hospital, 11-12.

March 11—Lecture on Tuberculosis and Eye Diseases, Illinois Eye and Ear Infirmary, 8 p. m.

March 14—Pediatrics Clinic, Cook County Hospital, 10-12.

Professor von Groer has lectured at the Mt. Sinai and Fifth Avenue Hospitals in New York City. Following his stay at the University of Illinois College of Medicine, he will lecture and hold clinics at the University of Michigan, University of Cincinnati, Western Reserve University in Cleveland, and the University of Iowa. He will then make a tour of the west where he will lecture at the University of Colorado in Denver, at Los Angeles Academy of Medicine, the San Francisco Academy of Medicine, the Portland Academy of Medicine, and the Seattle and Spokane Medical Societies.

Professor von Groer was formerly connected with the University of Breslau and for many years was associated with Professor von Pirquet and the Pediatrics Department of the University of Vienna. Professor von Groer was also instrumental in organizing the Pediatrics Department in Jugoslavia, and was appointed by President Hoover on the Child Welfare Commission in Poland.

Deaths

Corydon De Kalb Bundy, Kankakee, Ill.; College of Physicians and Surgeons, Chicago, 1902; aged 58; died, January 12, in Newport Ritchey, Fla., of myocarditis and hypertension.

Frederick A. Goetz, Chicago; Universitat, Leipzig, Saxony, Germany, 1878; aged 77; died, Oct. 22, 1930, of cerebral hemorrhage.

Lester Aloysius Halloran, Chicago; St. Louis University School of Medicine, 1919; aged 39; died, January 23, of pulmonary abscess.

Ernst Jentzsch, Chicago; Bennett College of Eclectic Medicine and Surgery, 1901; aged 61; died, February 3, of myocarditis, chronic nephritis and diabetes mellitus.

George John Laben, Chicago; College of Physicians and Surgeons, Chicago, 1900; formerly served in the Indian Service; aged 62; died, January 14, of carcinoma of the urinary bladder.

Albert F. Messner, Chicago; Hahnemann Medical College and Hospital, Chicago, 1890; aged 65; died, January 18, of chronic myocarditis.

Frank Donaldson Moore, Chicago; College of Physicians and Surgeons, Chicago, 1899; formerly associate professor of surgery at his alma mater; member of the American College of Surgeons; vice president and on the staffs of the Garfield Park and Frances Willard hospitals and on the staff of the Mother Cabrini Memorial Hospital; aged 60; died, January 28, of heart disease.

Willis J. Peak, Oakland, Ill.; St. Louis Medical College, 1861; Civil War veteran; aged 93; died, January 17, of chronic interstitial nephritis.

Maximilian Pincus, Chicago; Jenner Medical College, Chicago, 1908; aged 61; died, January 23, of chronic myocarditis.

John William Rust, Willow Springs, Ill.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1897; aged 60; died, January 13.

Joseph C. Shafer, Noble, Ill.; Eclectic Medical Institute, Cincinnati, 1907; aged 50; died, January 19, of pneumonia.

Frances R. Sherwood, Oak Park, Ill.; Rush Medical College, Chicago, 1888; at one time professor of surgery at the University of Illinois College of Medicine; formerly on the staff of the Cook County Hospital; aged 68; died, February 7, of arteriosclerosis and carcinoma of the rectum.

George Frederic Wentch, Earlville, Ill.; State University of Iowa College of Homeopathic Medicine, Iowa City, 1896; aged 72; died, Dec. 40, 1930, in the East Side Hospital, Waterman, of carcinoma.

ch, 1931

ries De-
nted by
e Com-

ollege of
58; died,
ocarditis

Leipzig,
22, 1930,

t. Louis
9; died,

f Eclec-
ed, Feb-
diabetes

ysicians
l in the
f carci-

Medical
5; died,

lege of
ly asso-
member
dent and
Willard
Memo-
art dis-

Medical
ed, Jan-

Medical
23, of

Bennett
Chicago,

ical In-
19, of

Rush
ofessor
Medi-
Hospi-
sis and

e Uni-
, Iowa
e East